Independent Technical Report on Mineral Resources Estimate for the Baixa Grande - Salinas Lithium Project,

Minas Gerais State, Brazil

Developed by GE21 Ltda. on behalf of:

Lithium Ionic Corp.

Effective Date: January 4, 2024
Issue Date: May 17, 2024

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Date and Signature

This Report, entitled “Independent Technical Report on Mineral Resources Estimate for the Baixa Grande - Salinas Lithium Project”, was prepared on behalf of Lithium Ionic Corp. by Leonardo de Moraes Soares and Paulo Bergman.

Dated at Belo Horizonte, Brazil, on May 17, 2024.

Original document signed and sealed.

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The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in the report authors' services, based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report.

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Currency is expressed in U.S. dollars and metric units are used, unless otherwise stated.

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UNITS, SYMBOLS AND ABBREVIATIONS

Name	Abbreviation
Australian Institute of Geoscientists	AIG
Average Transportation Distances	ATDs
Baixa Grande Room and Pillar	BRP
Baixa Grande Sublevel	BSL
Brazilian Institute of Geography, and Statistics	IBGE
Brazilian Lithium Company	CBL
Build Your Dreams	BYD
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
Canadian National Instrument 43-101	NI 43-101
Capital Expenditures	CAPEX
Celsius degree	ºC
Centimeter(s)	cm
Certified Reference Materials	CRM
Compound Annual Growth Rate	CAGR
Contemporary Amperex Technology Co., Ltd.	CATL
Cubic meter(s)	m^3
Dense Medium Separation	DMS
Diamond Drill Holes	DDH
Direct Lithium Extraction	DLE
Discounted Cash Flow	DCF
Eastern Brazilian Pegmatite Province	EBPP
Electric Vehicles	EVs
Electromagnetic	EM
End of Period	EOP
Environmental Control Plan	PCA
Environmental Impact Assessment	EIA
Exploration Authorization	EA
Exploratory Data Analysis	EDA
Fellow Australian Institute of Geoscientists	FAIG
Financial Compensation for the Exploration of Mineral Resources	CFEM
GE21 Consultoria Mineral Ltda.	GE21
General and Administrative	G&A
Global Positioning System	GPS

Gram(s) per cubic centimeter(s)	g/cm^3
Heavy Liquid Separation	HLS
Hectare	ha
Hight Pressure	HP
High Temperature	HT
Independent Technical Report	ITR
Induced Polarization	IP
Infrared	IR
Intermediate Pressure	IP
Intermediate Temperature	IT
Intermediate Waste Storage	I.W.S.
Internal Rate of Return	IRR
International Organization for Standardization	IOS
Kilometer(s)	km
Kilotons (metric)	kt
Life of Mine	LOM
Lithium Carbonate Equivalent	LCE
Lithium-Cesium-Tantalum	LCT
Load Haul Dump	LHD
Low Pressure	LP
Low Temperature	LT
Measured and Indicated	M&I
Medium Pressure	MP
Medium Temperature	MT
Metric tons per year	Mtpy
Member Australian Institute of Geoscientists	MAIG
Meters per hour(s)	m/h
Meter(s)	m
MGLIT Empreendimentos Ltda.	MGLIT
Millions of Years	Ma
Microsoft	MS
Millimeter(s)	mm
Mineable Stope Optimization	MSO
Mineral Resources Estimates	MRE
National Mining Agency	ANM
Near infrared	NIR

Neolit Minerals Participacões Ltda	Neolit
Net Present Value	NPV
Niobium-Yttrium-Fluorine	NYF
North	N
North-northwest	NNW
Operating Expenditures	OPEX
Operation License	OL
Ordinary Kriging	OK
Particle Size Analysis	PSA
Parts per million	ppm
Percent(age)	%
Pressure	P
Philosophy Doctor	PhD
Photometric	PM
Inch	"
Independent Technical Report	ITR
Installation License	LI
International Energy Agency	IEA
Portable Document Format	PDF
Preliminary License	LP
Preliminary Economic Assessment	PEA
Qualified Person (as defined in NI 43-101)	QP
Quality Assurance / Quality Control	QA/QC
Radiometric	RM
Reasonable Prospect for Eventual Economic Extraction	RPEEE
Resistivity	RES
Rock Mass Rating	RMR
Rock Quality Designation	RQD
Run-of-Mine	ROM
Selling, General & Administrative Expense	SG&A
SGS Geological Services	SGS
Standard Reference Materials	SRM
South	S
Sub-Level Retreat	SLR
Spodumene Concentrate at 3%	SC3
Spodumene Concentrate at 5.5%	SC5.5

Spodumene-quartz Intergrowth	SQUI
Spodumene-rich Pegmatites	SRP
Square kilometer(s)	km^2
Standard Operational Procedures	SOP
System of Units	SI
Temperature	T
Three-dimensional	3D
Ton(s) (metric)	t
Tons per cubic meter	t/m^3
Tons per hour	tph
TSX Venture Exchange	TSXV
Two-dimensional	2D
United States Dollars	US$
Universal Transverse Mercator	UTM
West	W
X-ray Fluorescence	XRF
X-ray Transmission	XRT
Year	y

1 EXECUTIVE SUMMARY

1.1 Introduction and Terms of Reference

GE21 Consultoria Mineral Ltda. ("GE21") was engaged by Lithium Ionic Corp. to prepare an Independent Technical Report ("ITR") containing a NI 43-101 Technical Report (the "Report") on Lithium Ionic's Baixa Grande deposit located in Minas Gerais State, Brazil ("Project"). This report titled "Independent Technical Report on Mineral Resources Estimate" outlines all relevant data about the Baixa Grande Project ("The Project"). They are technical information and data related to the drilling program and the status of the current Lithium Mineral Resources contained in the spodumene-bearing pegmatites.

The Project is located in Salinas in Brazil's "Lithium Valley" - a complex rock lithium district. The Independent Technical Report on Mineral Resources Estimate (MRE) includes only the Baixa Grande lithium deposits.

The effective date of this report is January 4, 2024, and the information in this report, including the reported resource estimates, are contained within an optimized pit and conceptual underground mineable MRE. The Report supports the disclosure by Lithium Ionic in the news release outlining the current MRE dated April 4, 2024.

1.2 Property description and location

The Project is in the Salinas municipality in the Northern Region of the State of Minas Gerais, in that covers part of the Jequitinhonha River basin, the Lithium Valley of Brazil. It is located approximately 640 km north-east of Belo Horizonte, the Minas Gerais capital city, and 100 km north of the city of Araçuaí (population approximately 34,000) and 215 km northeast of Montes Claros (population approximately 360,000). The Project is accessible by major paved roads such as BR-251, BR-116, BR-367 and MGC-342 (Figure 1-1).

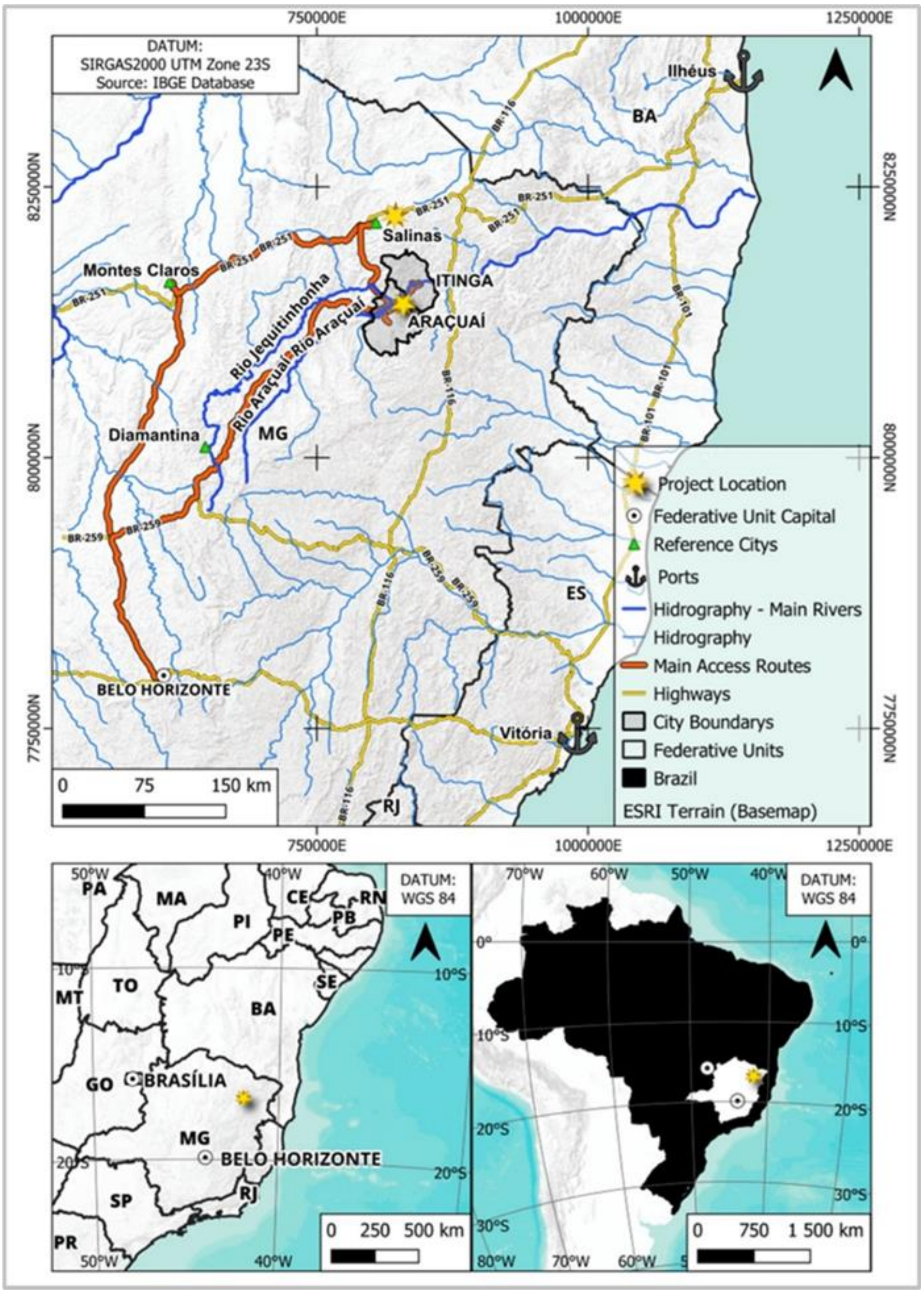


Figure 1-1 - Project Location.

1.3 Mineral Rights of Baixa Grande Project

Lithium Ionic's Project's encompass 30 claims, as detailed in Table 4.1 and Figure 4.2. These claims are split into two regions: the Itinga Project (18 claims) and the Salinas Project (11 Claims). This report will only approach the work accomplished in claim number 830.833/2001 and 830.926/2017 (Baixa Grande target), as shown in Figure 1-2 and in Table 1-1. The Baixa Grande target exploration licence area is located in the municipality of Salinas, Minas Gerais State.

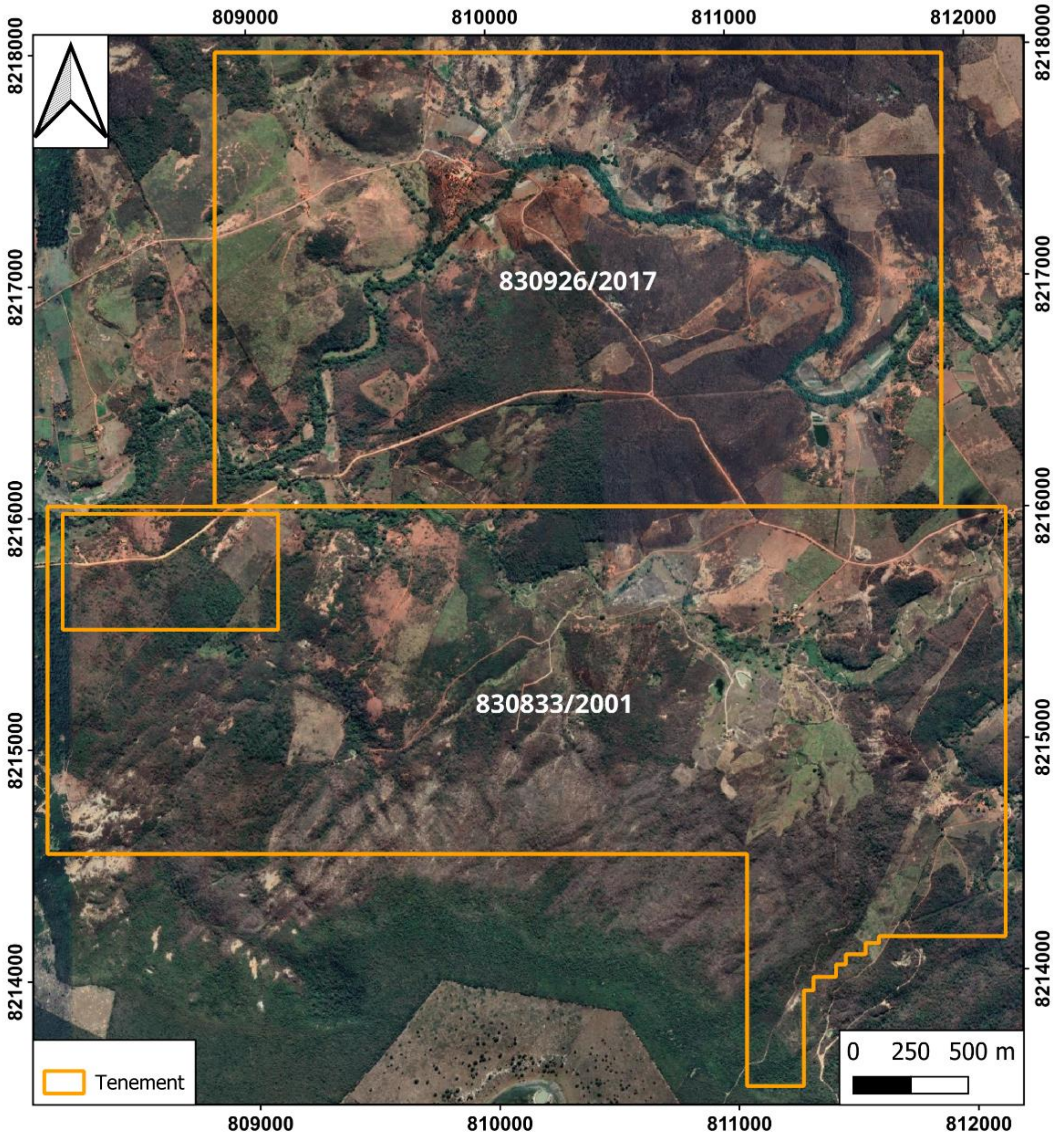


Figure 1-2: Baixa Grande Project Tenements Map.

Table 1-1 - Baixa Grande Project Mineral Tenure Summary

#	Process	Name	Area (ha)	Phase
1	830.926/2017	Salit Mineração LTDA	594.09	Approval Pending
2	830.833/2017	José Silva Lapa	662.56	Application of Concession

1.4 History

Neolit Strategic Minerals (“Neolit”), a private Brazilian company acquired in March 2023 by Lithium Ionic Corp., conducted the first drilling program at the Baixa Grande target at the end of 2022 through a contract with Energold Drilling, performing 4,037.10 meters.

All works at the Baixa Grande target started in 2022 and do not have a historical exploration data for spodumene, although old diggings (“garimpos” in Brazilian Portuguese) for gemstones and columbite-tantalite are found in the region.

Following Neolit's assumption of responsibility for the mineral survey on the 830.833/2001 and 830.926/2017 tenements, detailed geological surveys were conducted, revealing several outcrops of spodumene-rich pegmatites. During Neolit's mapping efforts, 67 rock samples were collected for geochemical analysis. Approximately 15% of the analyzed samples returned significant lithium values, providing support for the exploration drilling program.

Neolit's exploration drilling program comprised 4,037.10 meters across 24 holes. This program allows to a subdivision of the Baixa Grande target into four sectors: Oeste, Sobradinho, Cubo, and Ju. Among these sectors, three—Oeste, Sobradinho, and Cubo—yielded excellent intercepts at depth. This outcome became a key factor in the acquisition of Neolit by Lithium Ionic.

1.5 Geology, Mineralization and Deposit Style

1.5.1 Regional Geology

The Salinas Project lies in the Eastern Brazilian Pegmatite Province (EBPP), located in terranes of the Araçuaí Orogen. The EBPP, one of the largest pegmatitic populations in the world with c. 150,000 km2, contains pegmatite districts located in eastern Minas Gerais (c. 90% of the whole province), southeastern Bahia, and Espírito Santo States of Brazil (Figure 1-3).

Granitic pegmatites represent silica-saturated magmas variably rich in H2O and bearing fluids, as well as in other hyperfusible (fluxing) components (e.g., Li, Na), crystallized in rather closed chemical systems (cf. Cerný, 1991; London, 2008). The EBPP comprises the two known genetic types of pegmatites, both formed during the evolution of the Araçuaí Orogen: i) the anatectic pegmatites generated directly from the partial melting of country rocks; and ii) the residual pegmatites, representing late silicate melts released by fractional crystallization of parental granites. Genetic affiliation and other criteria allow pegmatite districts to be distinguished in the EBPP.

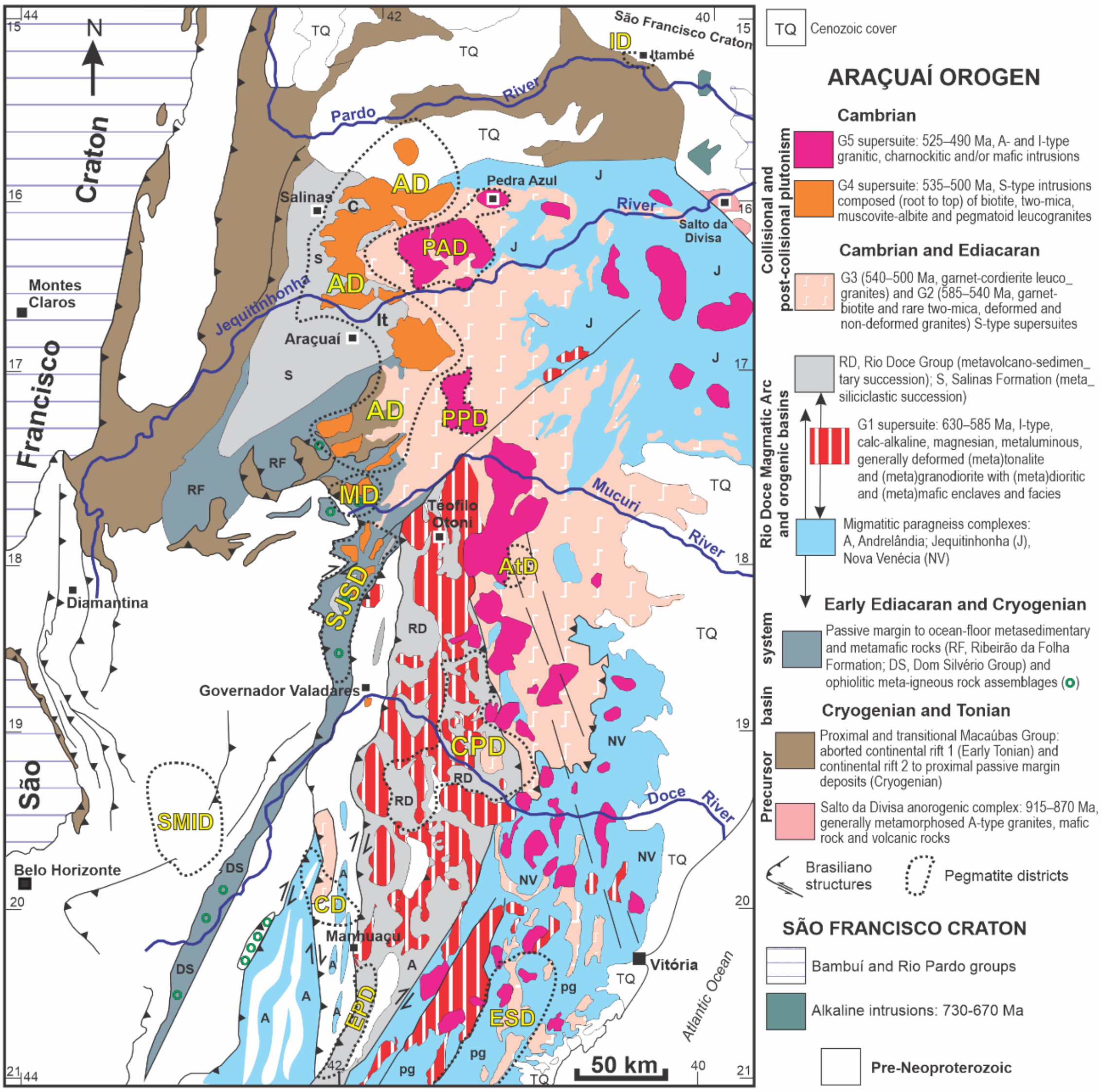


Figure 1-3: Simplified geologic map of the Araçuaí Orogen (modified from Pedrosa-Soares et al., 2020), highlighting the granite supersuites and pegmatite districts of the Eastern Brazilian Pegmatite Province (cf. Pedrosa-Soares et al., 2011, 2023): AD, Araçuaí, including the Curralinho (C) and Itinga (It) pegmatite fields; AtD, Ataléia; CD, Caratinga; CPD, Conselheiro Pena; ESD, Espírito Santo; ID, Itambé; MD, Malacacheta; PAD, Pedra Azul; PPD, Padre Paraíso; SJSD, São José da Safira; SMID, Santa Maria de Itabira. (Figure from Pedrosa-Soares et al., 2023).

1.5.2 Local Geology

The ongoing field mapping and exploration in the Baixa Grande area have revealed the existence of two geological units: (i) Salinas Formation, consisting of banded quartz-mica schists with lenses of calcsilicate rocks; and (ii) the G4 Supersuite, represented by an extensive pegmatite swarm, mainly comprising spodumene-rich pegmatites (SRP) and some barren pegmatites (Figure 1-4).

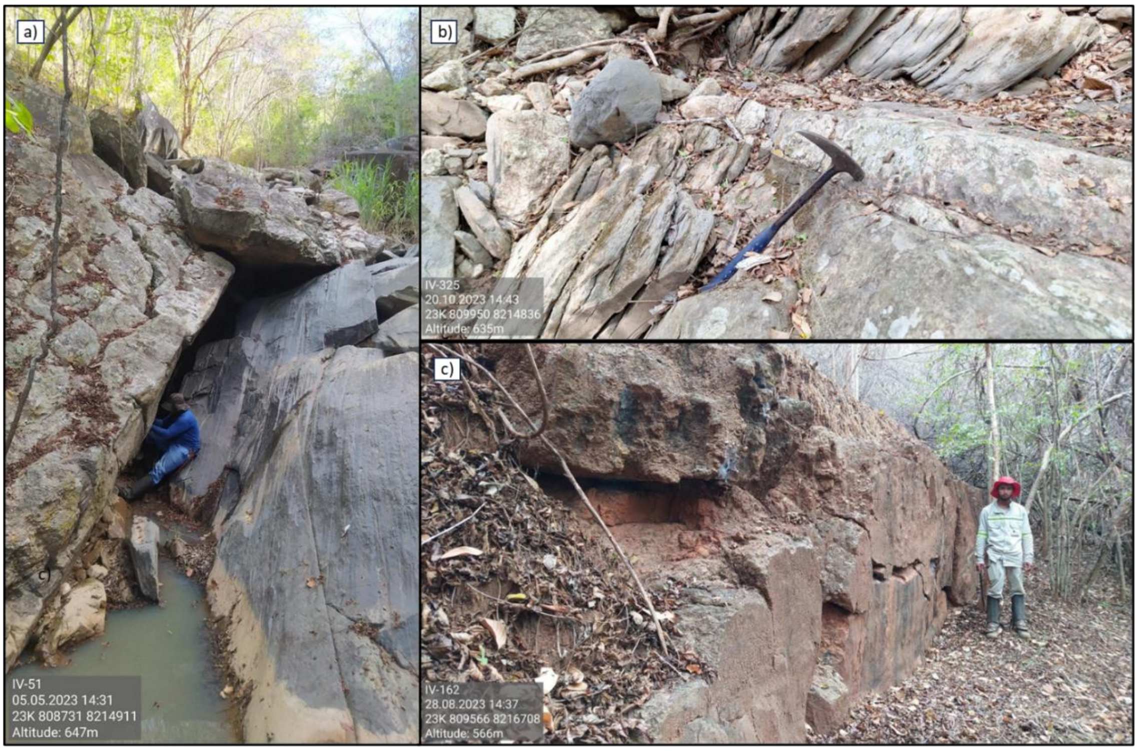


Figure 1-4: a) Spodumene-rich pegmatite (SRP) hosted by a fracture concordant to the strike but discordant to the dip of the banded quartz-mica schist of the Salinas Formation in the Oeste sector. b) Decameter-thick pegmatite host by a fracture discordant to the S1 foliation of the Salinas schist, Oeste sector. c) Outcrop showing the sub-vertical Noé Pegmatite.

Owing to the significant weathering typical of tropical regions, the surface of the Baixa Grande area predominantly comprises recent residual soils resulting from the decomposition of the underlying rocks. The residual soil from the schists is an orange to brown fine-grained (silt to clay) eluvium. In contrast, the pegmatite soil is typically a whitish, fine to coarse-grained, powdered eluvium, with a composition dominated by quartz, kaolinized feldspar and altered muscovite. In cases of lithium mineralization, this soil can also contain fine-grained, partially to almost weathered spodumene fragments.

1.5.3 Mineralization

The SRP orebodies of the Baixa Grande target are non-zoned but rather inequigranular pegmatites composed of spodumene (on average 23 vol%), perthitic microcline, albite, quartz, and muscovite, generally totalizing more than 95% of the whole orebody volume. Cassiterite, columbite-tantalite, cookeite, garnet, malaquite, and sulfide are accessory minerals.

The spodumene-rich pegmatites of the Baixa Grande target were emplaced in the Salinas Formation that consists of banded cordierite-quartz-mica schist with intercalations of calcsilicate rock, recording P-T conditions suitable for SRP occurrence. In the Baixa Grande target, the main host surfaces for SRP bodies are the SE-dipping fractures of the Salinas Formation.

Following the regional NE-SW structural trend, the Baixa Grande target comprises SRP swarms of NE-striking orebodies mostly discordant hosted by schist with NW-dipping schistosity (S1). The Baixa Grande pegmatites are tabular bodies with convex lens-shaped terminations, arranged in tight and staggered (en-echellon) swarms, locally with branched connections linking ore bodies, as in the Oeste sector pegmatites. The host rocks of SRP orebodies in the Baixa Grande target deposit are banded to laminated cordierite-quartz-mica schists, locally containing disseminated sulfide, with intercalations of massive calcsilicate rocks. Most cordierite forms ellipsoidal (egg-shaped) stretched porphyroblasts syn-kinematic to the regional S1 schistosity.

1.5.4 Deposit Style

According to the most accepted petrologic-metallogenetic classification of pegmatites, published by Cerný (1991) and updated by Cerný and Ercit (2005) and Cerný et al. (2012), all the spodumene-rich pegmatites found within the Baixa Grande deposit belong to the rare element class, Li subclass, and albite-spodumene type.

Although generally included in the LCT (Lithium-Cesium-Tantalum) family, the non- to poorly zoned spodumene-rich pegmatites (SRP) found in the Baixa Grande deposit, as well as all the orebodies mined in CBL's Cachoeira Mine since the 1990's (Romeiro and Pedrosa-Soares, 2005), the Xuxa and other spodumene-rich deposits of Sigma Lithium (Sá, 1977; Delboni et al., 2023), and the Bandeira and Outro Lado deposits of Lithium Ionic, are rather poor both in Ta and Cs when compared with the complex zoned LCT pegmatites (e.g., Generosa, Jenipapo, Murundu, Urubu and others) found in the Araçuaí Pegmatite District (cf. Sá, 1977; Romeiro, 1998; Quéméneur and Lagache, 1999; Dias, 2015) and elsewhere (e.g., Cerný 1991; London, 2008; Cerný et al., 2012).

For prospection and exploration work related to spodumene-rich deposits, it is very important to distinguish between the non- to poorly zoned spodumene-rich pegmatites (SRP, i.e., pegmatites of the albite-spodumene type) and the complex zoned LCT pegmatites.

1.6 Exploration

Fieldwork was conducted in the Baixa Grande target together with an exploration approach that encompassed chip rock sampling, soil sampling, a trench program, structural analysis and a drilling program (see chapter 10-DRILLING). These activities aim to achieve a more profound comprehension of the local geology and the identification of potential spodumene-rich pegmatites.

1.7 Drilling

Lithium Ionic successfully executed 295 diamond drill holes within the Baixa Grande Target, as detailed in Table 1-2.

All diamond drilling activities conducted within the Baixa Grande Property until February 2024 have been incorporated into the Mineral Resource estimation process. It is important to note that any drill holes completed in 2024 after this date, as well as pending sample assay results, have not been considered in the present resource statement.

Table 1-2: Baixa Grande Drill Holes Summary

Campaigns	Drill hole count	Total Drilled (m)
2022	25	4 037.1
2023	97	22 993.35
Total	122	27 030.45

Drill spacing typically ranges from 50m to 150m, with narrower spacing observed in the central portion of the drill pattern and wider spacing towards the pattern's edges. The mineralization intercepts vary in thickness, ranging from approximately 85% of the true width to nearly the true width of the mineralization.

The average pegmatite intersection spans from 0.3m to 53m, with an average true thickness of about 5m. In total, 257 mineralized intercepts from diamond drill holes (DDH) were utilized for modelling the 15 mineralized solids within the Baixa Grande Target. Each solid was assigned a numerical code in the tag column. Figure 1-5 presents a list the mineralized intervals from Baixa Grande drill holes that were incorporated into the 3D modeling of the mineralized solids

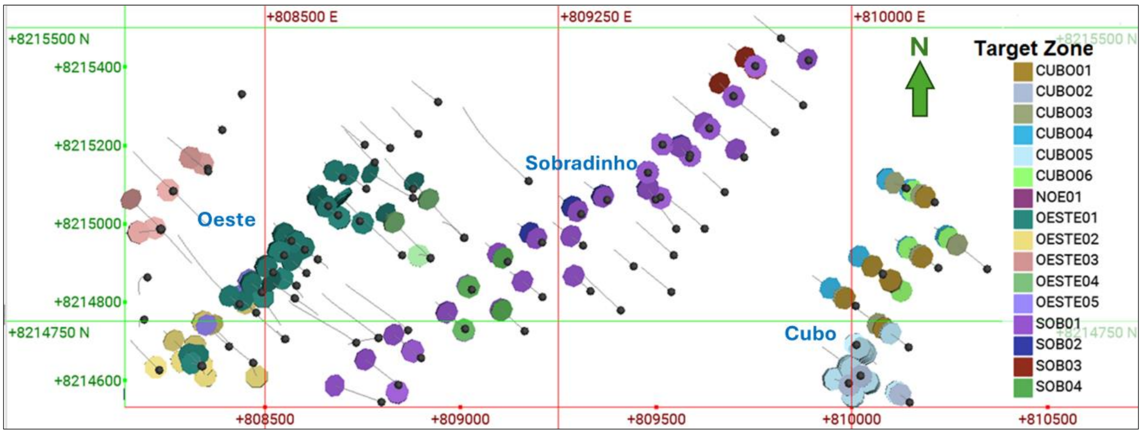


Figure 1-5: Horizontal Projection of Baixa Grande Drilling Holes with Mineralized Intercepts.

1.8 Sample Preparation, Analysis and Security

1.8.1 Sampling

Samples are prepared from NQ diameter drill cores (47.6mm core diameter) in general terms. Only the shallow drilling runs crossing weathering zone were drilled on HQ drilling diameters. Few samples were generated on HQ diameter. The sampling procedures described in this section reflect the current Standard Operational Procedures (SOP) in use by Lithium Ionic.

Sample intervals in the mineralized zones are defined based on a 1.00m support. Mineralized samples must have a minimum length of 1.00m and a maximum length of 1.50m. In some specific situations, samples shorter than 1.00m can be generated. These situations are described in detail in the SOP.

Outside the mineralized domains, the sampling support is 1.50m, and samples can range from 1.00m to 3.00m.

1.8.2 Sample Preparation, Security and Custody Chain of Custody

Samples are defined and marked on-site after logging and entering the data into the database. Cores are split in half using a diamond saw. Half of the core is left in the core box, while the other half is stored in plastic bags, accompanied by a printed sample tag, and sent to the lab.

Drill core samples are prepared and analyzed by an independent commercial laboratory (SGS Geosol). The SGS Geosol facility is ISO 9001, ISO 14001, and ISO 17025 certified. The sample shipment is delivered to the SGS Geosol facility in Vespasiano, Minas Gerais, Brazil, via a parcel transport company. At all times, samples are in the custody and control of the Company's representatives until delivery to the laboratory, where samples are held in a secure enclosure until processing. SGS Geosol sends a confirmation e-mail with details of samples received upon delivery. The chain of custody of the batches was carefully maintained from collection at the drill rig to delivery at the laboratory to prevent accidental contamination or mixing of samples and render active tampering as tricky as possible.

1.8.3 Density Measurements

The density SOP currently in use by Lithium Ionic states that density measurements should be taken for every geochemical sample generated. In the cases where the drill core quality does not allow for the density assay, this should be registered in the density sampling plan with a specified tag. The high frequency of the density sampling aims for the acquisition of a statistically robust database.

For the geochemical samples with more heterogeneity 3 samples should be taken, one on the top of the sample, other in the middle and other in the base. Homogenous geochemical samples should generate only one density sample. Density samples must have a minimum length of 10 cm and a maximum of 25 cm. Density is commonly measured in the unsampled half-cores, reflecting on a faster and more dynamic drillhole data collection process. All density data is stored in a database.

1.8.4 Sample Analysis

After the preparation, the core samples are analyzed by SGS Geosol. The chemical assays are performed using SGS's analytical method ICP90A, a multi-element analysis using fusion by sodium peroxide (Na_2O_2) and finish with ICP-OES analysis. If lithium results are above 15000 ppm, SGS Geosol re-analyzes for lithium through the ICP90Q_Li method, which is similar to the ICP90A but with higher Detection Limits.

1.8.5 Quality Assurance and Quality Control (QAQC)

The Quality Assurance and Quality Control program implemented was proposed by the independent company GE21. The sample batch composition includes 5 Quality Control Samples for every 30 regular samples. The Quality Control composition of the batches is described next:

- Coarse (Preparation) and Fine (Analytical) Blanks: 6% of the batch, or two blanks per batch, one of each type.
- Standards: 6% of the batch, or two standards per batch.
- Crushed Duplicates: 3% of the batch, or 1 sample per batch.
- Pulverized Duplicates: 3% of the batch, or 1 sample per batch.

The Qualified Person believes that the sampling, sample preparation, security and analysis performed by Lithium Ionic and hired companies are suited for a Mineral Resource Estimation study. Quality Assurance procedures follow the industry's best practices, and Quality Control results are within industry standards, attesting to the quality of the assay information in the database.

1.9 Data Verification

Data verification by the QP responsible for this section of the Technical Report, Leonardo de Moraes Soares who is a senior geologist from GE21, included one site visit between 13 and 14 of September 2023. Lithium Ionic allowed unlimited access to the Company's facilities during this time. During the site visits, QP checked in the field mineralization outcrops, drill rigs and core shed, as well as a review of information about exploration results, sampling procedures, sampling preparation, chemical analysis, topographic and drillhole deviation surveys, discussions about interpretation about mineralization model. Data from selected drill holes (sample custody, assays, QA/QC program, downhole surveys, lithologies, alteration and structures) was also checked and discussed with Lithium Ionic technical team.

1.10 Mineral Processing and Metallurgical Testing

There are two main processes to be used to concentrate the spodumene content in the pegmatite ore; Dense Media Separation, if the Li2O size liberation is coarse above 9.5mm, or flotation. Both processes are able to produce spodumene concentrate under the marketing specification of Li2O grade above 5.5% and Fe2O3 below 1%.

Three samples were collected from Sobradinho, Cubo and Oeste for a preliminary ore sorter and HLS tests conducted by Steinert and SGS Geosol, respectively. Lithium oxide grades range from 0.95 to 1.11% for the three samples. Iron oxide is above the spodumene concentrate spec limit of 1%. Rare elements like niobium, tantalum, phosphate and tin are quite low. K-feldspar may be on the level around 15-20%, based on the potash oxide content.

The flowsheet tested simulate spodumene concentration by dense media separation for particle size range between -6.35+0.5mm in three heavy liquid densities (2.7 g/cm³, 2.8 g/cm³ and 2.9 g/cm³). The average HLS results are presented in Figure 2. The lithium recovery to achieve 5.50% Li2O in concentrate would be 75.8%.

1.11 Mineral Resource Estimate

Lithium Ionic conducted comprehensive 3D geological modelling, statistical and geostatistical studies, and grade estimation for the Baixa Grande target. This estimation considered various factors, such as the quantity and distribution of available data, interpreted controls on mineralization, mineralization style, and the quality of the sampling data. The geological modelling and estimation processes were executed by GE21 utilizing Leapfrog 2023.1 software. The UTM Projection – Zone 22 South in SIRGAS 2000 Datum was adopted as the reference coordinate system for the database in this project.

1.11.1 Drilling Database

The database underwent comprehensive visual validation, considering the interrelation of tables, identifying gaps and overlaps, and ensuring the inclusion of crucial information. Additionally, using Leapfrog Geo software, GE21 conducted validation checks on the Collar, Survey, Assay, and Lithology tables. This stage of the work did not reveal any significant inconsistencies, as these had already been verified during the Data Verification stage.

The original dataset provided by Lithium Ionic encompassed data from 122 surface diamond drill holes (totaling 27030.45 meters). The Baixa Grande database contains 3276 assay intervals from drillholes totaling 3055.47 meters. The assay table includes data for Li2O (%). Following a thorough review of the database, the Li2O (%) data was used for subsequent statistical analysis, block modelling, and resource estimation.

1.11.2 Geological Modeling

Initially, cross-sectional interpretations were crafted, utilizing traditional manual techniques and advanced cartographic software platforms such as QGIS, ArcGIS, and Leapfrog. These initial steps laid the groundwork for a robust modelling process.

A set of grade shell sections, with an envelope delimiting zones with a cut-off grade of 0.3% Li2O (%), was interpreted by the Lithium Ionic team. The interpretations obtained were transformed into a set of implicit 3D models, each aligned with a distinct strike direction corresponding to its domain.

The Qualified Person considers the geological and mineralization 3D modelling method and interpretations as suitable for mineral resource estimation study, based on the coherence with conceptual mineralization model, adherence with drilling and sampling data and the spatial continuity of the grades inside the modeled pegmatites.

1.11.3 Geoestatistical Structural Analysis

1.11.3.1 Regularization of Samples

The analysis of the sample support showed that more than 72% of the drilling samples have a length equal to 1 meter. GE21 caried out the regularization of samples in 1 meter for the complementary studies of statistics and geostatistics. If the residual length of the composite is less than 0.20 meters, it is equally distributed within the domain boundary with a minimum coverage of 50%.

1.11.3.2 Exploratory Data Analysis (EDA)

Statistical analysis on composited drilling samples was performed for the Li_2O% variable inside each modelled horizon.

1.11.3.3 Variographic Analysis

The structural analysis of the domains was conducted to determine the variographic parameters, which are essential for determining the spatial continuity model of the grade variables and for the grade estimate.

Variograms were generated explicitly for Li_2O% within the spodumene pegmatite suite. This approach considered the geological similarity among them, enhancing the robustness of the variograms. Three distinct sets of veins were considered: Cubo, Oeste and Sobradinho.

1.11.4 Block Model

A block model was built to carry out the grade estimation. The model's dimensions (16m x 16m x 4m) were defined based on the quarter of minimum drilling grid spacing. The sub-blocks model was set in 2m x 2m x 2m size to ensure the geometric adherence of the modelled bodies.

The dimensions of the block models and the attributes are shown in Table 1-3 and Table 1-4.

Table 1-3: Block Model Dimensions.

	X	Y	Z
Minimum Coordinates (m)	807965	8214389	-128
Maximum Coordinates (m)	810957	8216373	868
Number of nodes	188	125	250
Origin (Center) (m)	807965	8214389	-128
Origin (Corner) (m)	807957	8214381	-130
Block size (m)	16	16	4
Sub-Block	2	2	1
Azimuth: 320 degrees (rotate clockwise around the Z axis when looking down) Dip: 40 degrees (then rotate around the X' axis down from the horizontal plane) Pitch: 0 degrees (then rotate clockwise around the Z'' axis when looking down)			

Table 1-4: Block Model Variables Summary.

Attribute Name	Type	Deals	Background	Description
02.GM_GradeShell_BG	Character	-		Grade Shell Model
OREBODY	Character	-		Spodumene Veins Model
Class	Character	-		Mineral Classification
Density	Real	4	-99	Density Values
OXCOD	Character	-		Weathering Model Code
Li_2O	Real	4	-99	Li_2O OK estimation

1.11.5 Grade Estimation

The Li_2O grade estimate was carried out by Ordinary Kriging (OK) method using the Leapfrog Edge software, based on the structural analysis results described in this work. Density (%) variable was estimated by inverse of distance weighting applying the power parameter of two.

Each mineralized vein was estimated independently, in a hard boundary strategy, ensuring that samples from one domain did not influence neighboring domains. The variograms were initially modelled considering the structural continuity across the entire set of domains, followed by an adjustment for honoring the specific behavior for each domain.

1.11.6 Estimation Validation

The QP carried out the validation of the estimate through visual verification and by the global and local bias verification using comparative methods based on Nearest Neighbour estimate.

NN-Checks plots were produced to validate the smoothing effect of the kriging estimate and the global bias. The results show global bias analysis of the estimated Li2O and density variables. Results show the expected smoothing effect of the grade estimation by Ordinary Kriging within the acceptance limits. The comparative analysis also shows that Ordinary Kriging globally respects the average grades, and the global bias in the estimated grades is within the limits of acceptance.

1.11.7 Density

The density in the spodumene pegmatites was estimated by Inverse of distance. The schists density was defined as the mean of the 2297 samples from the Lithium Ionic database. The weathered zone does not have measurements, and GE21 has adopted the value 1.8g/cm^3 for this domain, a common value used by other companies in the Jequitinhonha Valley region. GE21 recommends that additional density tests be carried out in weathered zones.

1.11.8 Mineral Resources Classification

The definition of mineral resource class was carried out applying following rules:

- The Measured Mineral Resource classification had as a reference the 50 meters of the average Euclidean distance to sample used in ordinary kriging estimation with a minimum of five composites in at least three different drill holes.

- The Indicated Mineral Resource classification had as a reference the 100 meters of the average Euclidean distance to sample used in ordinary kriging with a minimum of five composites in at least three different drill holes.
- The Inferred Mineral Resource classification is all remaining estimated blocks.
- The total Mineral Resources were constrained within the boundaries of the Mining Rights and the RPEEE (Reasonable Prospect for Eventual Economic Extraction - RPEEE) process, which was divided into two stages: open pit and underground pit.

Table 1-5 - Open Pit Baixa Grande Mineral Resource Estimate.

Category	Resource (Mt)	Grade (% Li2O)	Contained LCE (kt)
Measured	0.94	1.22	28.360
Indicated	**3.14**	**1.11**	**86.194**
Measured + Indicated	**4.08**	**1.13**	**114.554**
Inferred	5.54	0.99	136.634

Notes related to the Mineral Resource Estimate:

1. The spodumene pegmatite domains were modeled using composites with Li2O grades greater than 0.3%
2. The mineral resource estimates were prepared in accordance with the CIM Standards, and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
3. Mineral Resources are not ore reserves and are not demonstrably economically recoverable.
4. Grades reported using dry density.
5. The effective date of the MRE was January 4, 2024.
6. The QP responsible for the Mineral Resources is geologist Leonardo Soares (MAIG #5180).
7. The MRE numbers provided have been rounded to the estimate relative precision. Values cannot be added due to rounding.
8. The MRE is delimited by Lithium Ionic Baixa Grande Target Claims (ANM).
9. The MRE was estimated using ordinary kriging in 16m x 16m x 4m blocks.
10. The MRE report table was produced in Leapfrog Geo software.
11. The reported MRE only contains fresh rock domains.
12. The MRE was restricted by a pit shell using a selling price of 2750 US$/t Conc., Mining cost of 2.50 US$/ton mined, processing cost of 12.50 US$/ ton ROM and a selling cost of 112.56 US$/t conc.

Table 1-6 - Underground Pit Baixa Grande Mineral Resource Estimates

Category	Resource (Mt)	Grade (% Li2O)	Contained LCE (t)
Measured	0.17	0.93	3.910
Indicated	1.61	1.01	40.213
Measured + Indicated	**1.78**	**1.00**	**44.123**
Inferred	3.36	0.95	78.938

Notes related to the Mineral Resource Estimate:

1. The spodumene pegmatite domains were modeled using composites with Li2O grades greater than 0.3%
2. The mineral resource estimates were prepared in accordance with the CIM Standards, and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
3. Mineral Resources are not ore reserves and are not demonstrably economically recoverable.
4. Grades reported using dry density.
5. The effective date of the MRE was January 4, 2024.
6. The QP responsible for the Mineral Resources is geologist Leonardo Soares (MAIG #5180).
7. The MRE numbers provided have been rounded to the estimate relative precision. Values cannot be added due to rounding.
8. The MRE is delimited by Lithium Ionic Baixa Grande Target Claims (ANM).
9. The MRE was estimated using ordinary kriging in 16m x 16m x 4m blocks.
10. The MRE report table was produced in Leapfrog Geo software.
11. The reported MRE only contains fresh rock domains.
12. The MRE was restricted by interpreting suitable-grade shells using a 0.5% Li2O cut-off for underground resources.

1.12 Conclusions and Recommendations

Mineral Resources were estimated and limited to the areas outlined using the Mining Rights polygonal that comprise the Baixa Grande Property and the Reasonable Prospect for Eventual Economic Extraction - RPEEE.

The Baixa Grande database contains 3276 diamond drillhole assay intervals covering 3055.47 meters.

A set of solid grade shells for estimation domains was created using a 0.3% Li2O (%) threshold. These interpretations were then transformed into a series of implicit 3D models, aligned between 116º and 151º strike directions. Additionally, weathering modeling was performed, taking into account the information provided in the logs. The model was built from implicit modelling using the Leapfrog 2023 software.

The Ordinary Kriging (OK) estimation method was applied to the Li2O% variable, while the Inverse Distance (ID) method was utilized for the Density variable, both based on the outcomes of a structural analysis.

The recommendation is to continue the development of the Project through additional detailed investigations and higher confidence engineering studies. The aim being to complete a higher confidence engineering study as the next major project milestone.

The following recommendations are made with respect to future work on the Property. This work will be required for upgrading Baixa Grande's Resources to Indicated and Measured category, and to advance next stage detailed engineering and economic studies. These are listed as separate phases, as increasing the confidence of the Resources to Indicated or Measured category will be required prior to economic studies.

GE21 proposes the following recommendations for the continuous improvement of the Mineral Resource estimate:

- A 50x50m infill drilling program in domain of the indicate resource classification where will focus on resource delineation improvement.
- A 100x100m infill drilling program in domain of the inferred resource classification where will focus on resource delineation improvement.
- A density campaign to measure the density of drill holes cores by drying the samples in an oven, as well as waterproofing them. Compare the results with the methodology used in the current project procedure to check whether there is a bias in the results.
- Conduct an on-site density survey in the weathered zone.
- An updated mineral resource assessment is also recommended through an infill drilling program.

2 INTRODUCTION AND TERMS OF REFERENCE

GE21 Consultoria Mineral Ltda. ("GE21") was engaged by Lithium Ionic Corp. to prepare an Independent Technical Report ("ITR") containing a NI 43-101 Technical Report (The "Report") on Lithium Ionic's Baixa Grande deposit located in Minas Gerais State, Brazil ("Project"). This report titled "Independent Technical Report on Mineral Resources Estimate for the Baixa Grande-Salinas Lithium Project" outlines all relevant data about the Salinas Project ("The Project"). They are technical information and data related to the drilling program and the status of the current Lithium Mineral Resources contained in the spodumene-bearing pegmatites.

This Report and the estimates herein comply with the requirements of the Canadian Securities Administrators' National Instrument 43-101 – Standard of Disclosure for Mineral Projects ("NI 43-101") and Form 43-101F1 – Technical Report ("Form 43-101F1").

The Project is located in Salinas in Brazil's "Lithium Valley" - a complex rock lithium district. The Independent Technical Report on Mineral Resources Estimate (MRE) includes only the Baixa Grande lithium deposits.

Lithium Ionic Corp. is headquartered in Toronto, Ontario (36 Lombard Street, Floor 4, Toronto, ON, Canada, M5C 2X3) with management offices in Nova Lima (Alameda Oscar Niemeyer, 1033 – sls 133/134 Vila da Serra – Nova Lima – Minas Gerais- CEP 34006-065 – Brazil) and Araçuaí (Recife Street 96, Araçuaí, Minas Gerais – CEP 39600-000, Brazil). It is a publicly traded Canadian exploration and development company listed on the TSX Venture Exchange ("TSXV"). The Company is acquiring, exploring, and developing mineral properties, primarily focusing on exploring in Brazil. Exploration is conducted through the Company's wholly owned Brazilian subsidiary, MGLIT Empreendimentos Ltda. ("MGLIT") and Neolit Minerals Participacões Ltda. ("Neolit").

The effective date of this report is January 4, 2024, and the information in this report, including the reported resource estimates, are contained within an optimized pit and conceptual underground mineable MRE. The Report supports the disclosure by Lithium Ionic in the news release outlining the current MRE dated April 04, 2024.

2.1 Qualifications, Experience, and Independence

The Qualified Person responsible for the Mineral Resource Estimation is the geologist Leonardo de Moraes Soares, who has more than 22 years of relevant experience in Geology Exploration and Mineral Resource Estimation. Mr. Soares is a full-time employee of GE21 Consultoria Mineral. He has considerable experience dealing with commodities, such as iron ore, lithium, and gold. Mr. Soares is a member of the Australian Institute of Geoscientists (MAIG).

The Qualified Person responsible for this report's content on issues related to Mineral Processing and Metallurgical Tests, and Recovery Methods is Paulo Bergman (FAusIMM, B.Sc.), a Mining Engineer of GE21 Consultoria Mineral, who has more than 40 years of experience in mining projects. Mr. Bergman is a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM).

Bernardo Cerqueira Viana (FAIG, B.Sc.) is the reviewer of this technical report. Mr. Viana has at least 22 years of experience in all aspects of mining project evaluation, from initial exploration to bankable feasibility studies. He is a senior geologist and managing director of GE21 Mineral Consulting.

Each of the authors of this report has the required qualifications, experience, competence, and independence to be considered a "Qualified Person," as defined by NI 43-101.

Neither GE21 nor the authors of this report have or have had, any material interest vested in Lithium Ionic Corp. or any of its related entities. GE21's relationship with Lithium Ionic is strictly professional, consistent with that held between a client and an independent consultant. This report was prepared in exchange for payment based on fees stipulated in a commercial agreement. Payment of these fees is not dependent on the results of this Report.

The Table 2-1 presents the QPs Matrix of responsibility.

Table 2-1: Presents the QPs Matrix of Responsibility.

Company	Professional	Site Visit	Responsibility
GE21	Leonardo de Moraes Soares	Between 13 and 14 of September 2023	Items 1 to 12, 14 and partial responsibility on 25 to 27.
GE21	Paulo Bergman	-	Items 13 and partial responsibility on 25 to 27.
GE21	Bernardo Horta Cerqueira Viana	-	Report Peer Reviewer
All Qualified persons are responsible for the corresponding sections within Items related to the preceding Items of this Technical Report.			

2.2 Effective Date

The current MRE effective date is January 4, 2024.

2.3 Units of Measure

Unless otherwise stated, the units of measurement in this Report are all metrics in the International System of Units ("SI"). Unless stated otherwise, all monetary units are expressed in United States Dollars ("US$"). The UTM projection, Zone 24 South, SIRGAS 2000 datum, was adopted as a spatial reference.

3 RELIANCE ON OTHER EXPERTS

The Authors have not independently verified ownership or mineral title beyond the information that Lithium Ionic has provided. The Property description presented in this Report is not intended to represent a legal or any other opinion as to title.

Verification of information concerning Property status and ownership, which are presented in Item 4 below, has been provided to the Author by Carlos H C Costa, VP Exploration for Lithium Ionic by way of an Email on July 14, 2023. The Author only preliminary reviewed the land tenure and has not independently verified the legal status or ownership of the Property or any underlying agreements or obligations attached to ownership of the Property. However, the Author has no reason to doubt that the title situation is other than what is presented in this technical report (Item 4). The Author is not qualified to express any legal opinion concerning Property titles or current ownership.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Project is located in the Northern Region of the State of Minas Gerais, in that covers part of the Jequitinhonha River basin, the Lithium Valley of Brazil. It is located approximately 640 km north-east of Belo Horizonte, the Minas Gerais capital city, and 100 km north of the city of Araçuaí (population approximately 34,000) and 215 km northeast of Montes Claros (population approximately 360,000). The Project is accessible by major paved roads such as BR-251, BR-116, BR-367 and MGC-342 (Figure 4-1).

This Report will primarily focus on mineral resource estimates for one of the Salinas Project mineral exploration targets, namely, the Baixa Grande target, which is located at Latitude 16° 07' S and Longitude 42° 05' W in the SIRGAS 2000 map projection. The SIRGAS 2000 UTM Zone 23S coordinates are 810,500 m E 8,215,750 m N.

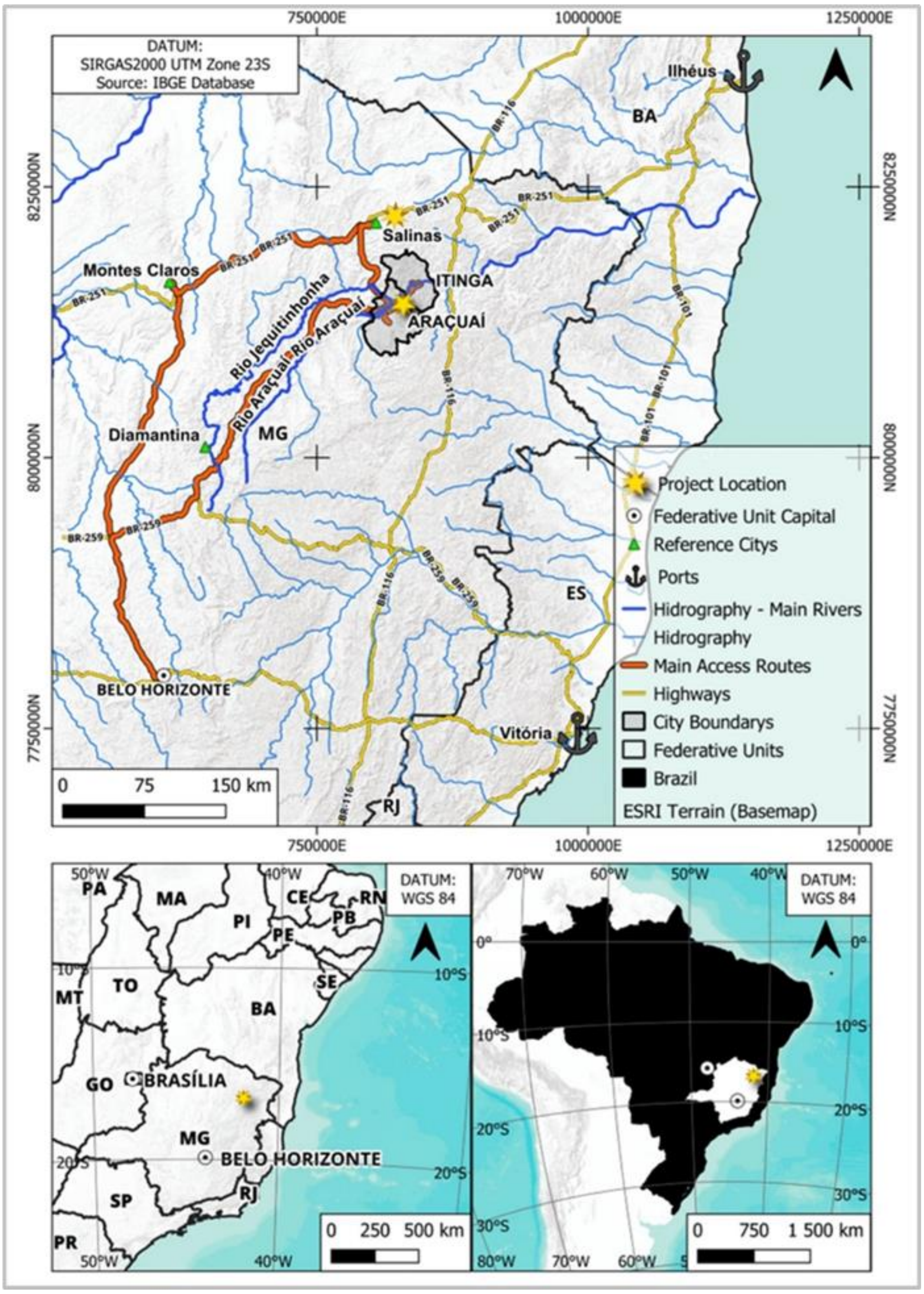


Figure 4-1: Project Location.

4.2 Mineral Tenure

The legal framework for the development and use of mineral resources in Brazil was established by the Brazilian Federal Constitution, which was enacted on October 5, 1988 (the Brazilian Constitution) and the Brazilian Mining Code, which was enacted on January 29, 1940 (Decree-law 1985/40, later modified by Decree-law 227, of February 29, 1967). The National Mining Agency (Agência Nacional de Mineração, or ANM) oversees the Mining Code. There are two main legal regimes under the Mining Code regulating Exploration and Mining in Brazil: Exploration Authorization ("Autorização de Pesquisa") and Mining Concession ("Concessão de Lavra").

According to the Brazilian Constitution, all mineral resources in Brazil are the property of the Federal Government. The Brazilian Constitution also guarantees mining companies the entire property of the mineral products mined under their respective concessions. Mineral Rights come under the jurisdiction of the Federal Government, and mining legislation is enacted at the Federal level only. To apply for and acquire mineral rights, a company must be incorporated under Brazilian law, have its management domiciled within Brazil, and have its head office and administration in Brazil.

There are no restrictions on foreign investment in the Brazilian mining industry, except for mining companies that operate or hold mineral rights within a 150 km-wide strip of land parallel to the Brazilian terrestrial borders. In this instance, the equity interests of such companies must be majority Brazilian-owned. Exploration and mining activities in the border zone are regulated by the Brazilian Mining Code and supporting legislation.

Applications for an Exploration Authorization ("EA") are made to the ANM and are available to any company incorporated under Brazilian law and maintaining a main office and administration in Brazil. EAs are granted following the submission of required documentation by a legally qualified Geologist or Mining Engineer, including an exploration plan and evidence of funds or financing for the investment forecast in the exploration plan. An annual fee per hectare, ranging from approximately US$0.50/ha to US$ 1.00/ha, is paid by the holder of the EA to the ANM, and a final report of the exploration work must be submitted by the end of the three years. No exploration work is permitted during the review period of a formal EA application.

EAs are valid for a maximum of three years, with a maximum extension equal to the initial period, issued at the discretion of the ANM. Annual fees per hectare increase by 50% during the extension period. After submitting a Final Exploration Report, the EA holder may request a mining concession. Mining concessions are granted by the Brazilian Ministry of Mines and Energy, have no set expiration date, and are valid until the total depletion of mineral resources. Mining concessions remain in good standing subject to submission of annual production reports and payments of royalties (CEFEM), which can be between 1% and 3%, to the federal government. CEFEM is 2% for Lithium in Brazil.

Areas where the maximum extension of an EA has expired, and a company has failed to submit a positive Final Exploration Report and mining concession request are designated with a status of "Public Offer." Before Decree nº 9.406/2018, the public offer is auctioned. It is awarded to a company based on the best technical proposal regarding exploration activities and previous knowledge of the specific mineral right. The winning company bid is based on which company has offered the most cash in an auction procedure.

The Project information and temporal evaluation connect current Brazilian regulations governing exploration and mining permits.

4.3 Mineral Tenure Status

Lithium Ionic's Project's encompass 30 claims, as detailed in Table 4.1 and Figure 4.2. These claims are split into two regions: the Itinga Project (18 claims) and the Salinas Project (11 Claims). This report will only approach the work accomplished in claim number 830.833/2001 and 830.926/2017 (Baixa Grande target), as shown in Figure 4.2. The Baixa Grande target exploration licence area is located in the municipality of Salinas, Minas Gerais State (Figure 4-2 and Figure 4-3).

The QPs have not reviewed the mineral tenure nor independently verified the legal status, ownership of the Project area, underlying property agreements or permits. The QPs have entirely relied upon and disclaimed responsibility for the information the Lithium Ionic management team via e-mails. This information is used in Item 4 of the report and supports the Mineral Resource estimate in Item 14.

The Baixa Grande target property area comprises two tenements covering approximately 1,256.65 ha (Table 4-1).

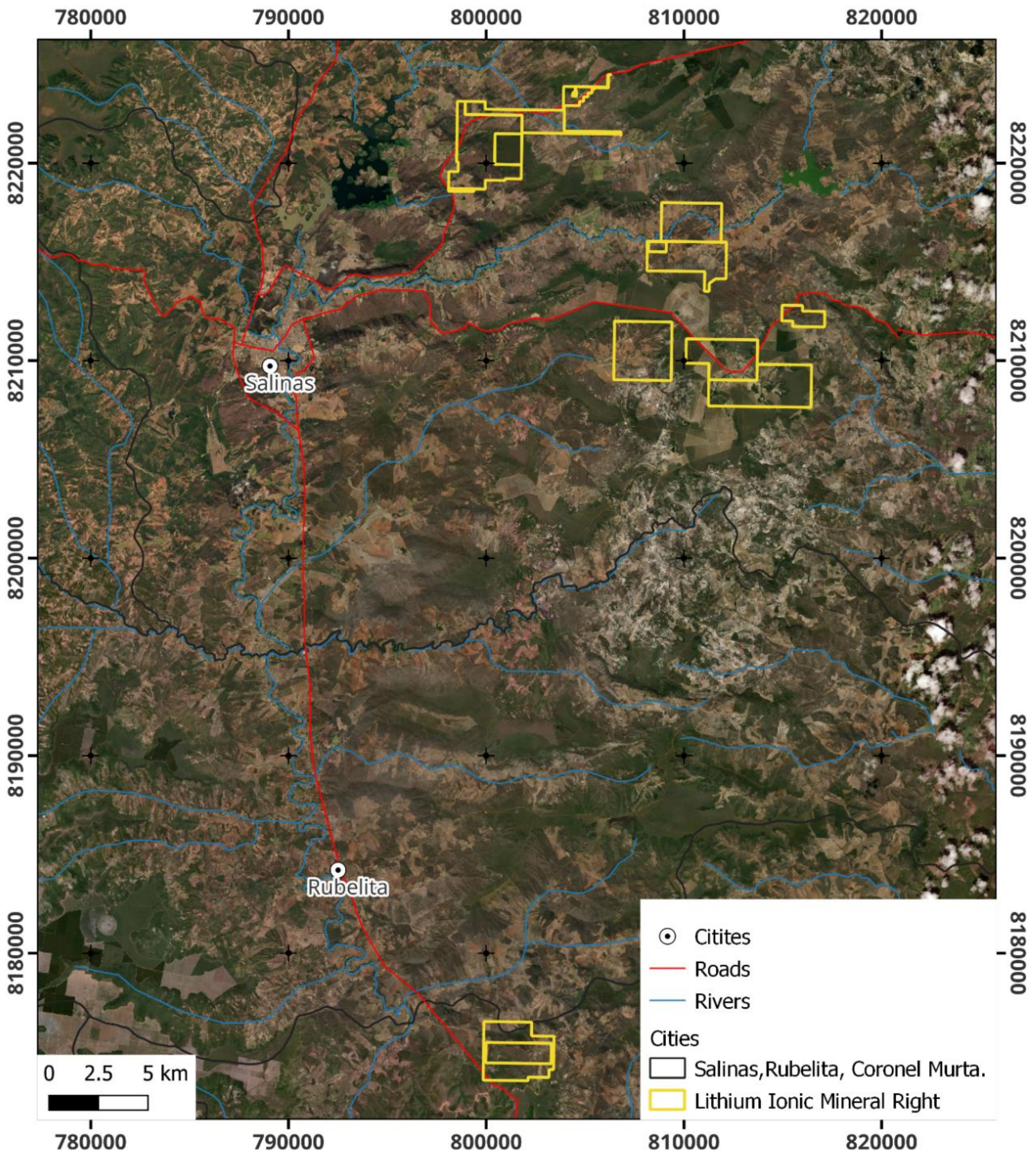


Figure 4-2: Lithium Ionic Tenements Map

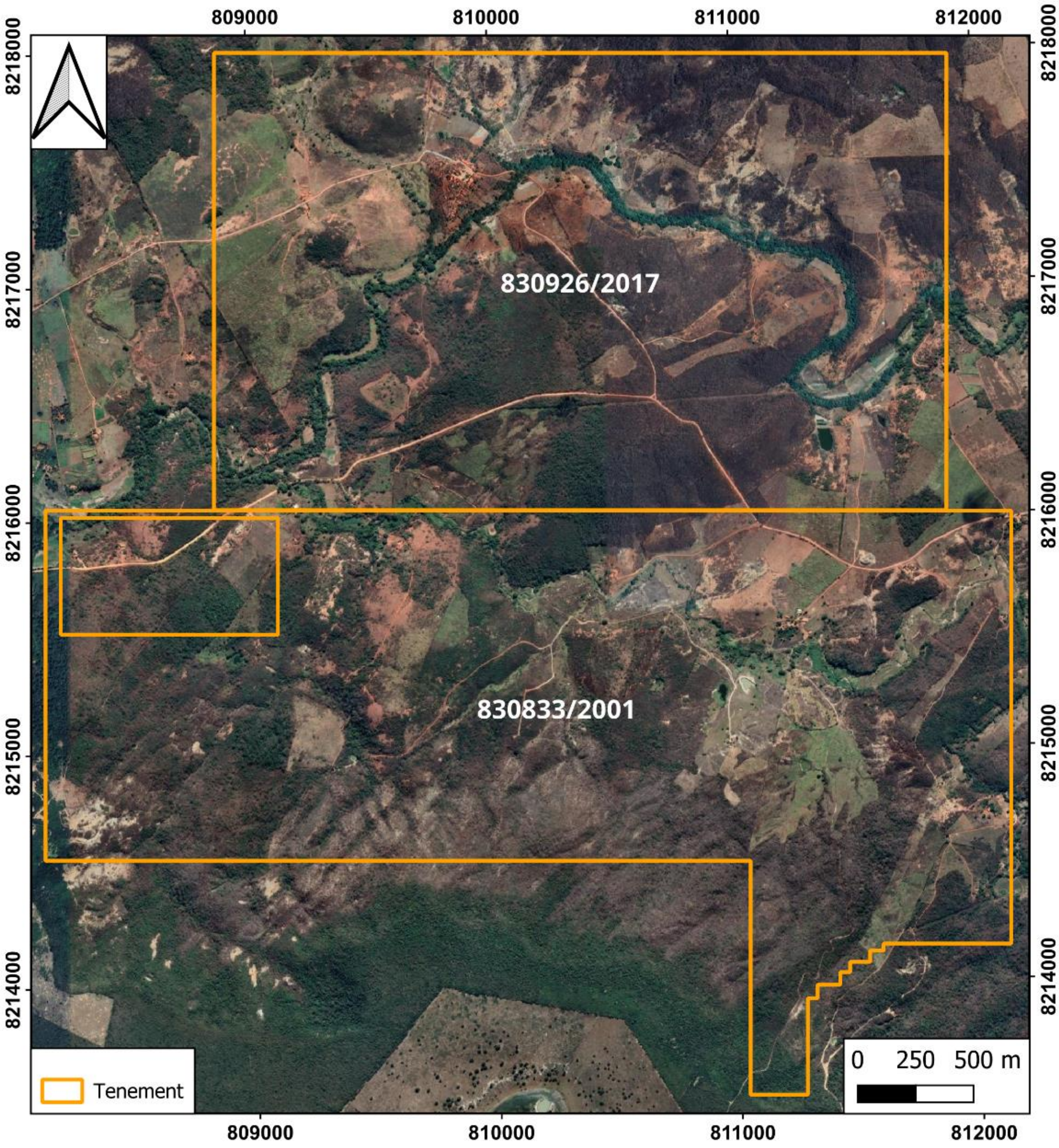


Figure 4-3: Baixa Grande Project Tenements Map.

Table 4-1: Lithium Ionic Land Tenure Information.

Claim Number (ANM)	Area (ha)	Status	Name
832.439/2009	156.77	Approval Pending	MGLIT EMPREENDIMENTOS LTDA
831.684/2016	325.66	Permit Extension	MGLIT EMPREENDIMENTOS LTDA
831.118/2016	146.88	Permit Extension	MGLIT EMPREENDIMENTOS LTDA
831.703/2016	305.87	Permit Extension	MGLIT EMPREENDIMENTOS LTDA
831.117/2016	2.27	Approval Pending	MGLIT EMPREENDIMENTOS LTDA
831.119/2016	401.65	Permit Extension	MGLIT EMPREENDIMENTOS LTDA
831.116/2016	9.77	Approval Pending	MGLIT EMPREENDIMENTOS LTDA
831.282/2023	315.68	Application for Concession	MGLIT EMPREENDIMENTOS LTDA
833.709/2013	414.96	Approval Pending	MGLIT EMPREENDIMENTOS LTDA
831.307/2004	300.19	Final Report Approved	MGLIT EMPREENDIMENTOS LTDA
832.347/2022	599.88	Permit	MGLIT EMPREENDIMENTOS LTDA
832.334/2022	169.39	Permit	MGLIT EMPREENDIMENTOS LTDA
TOTAL	**3,148.97**		
831.036/2005	48.70	Application for Concession	MINERAÇÃO BORGES LTDA
831.352/2004	622.64	Approval Pending	MINERAÇÃO BORGES LTDA
830.980/2006	540.57	Application for Concession	MINERAÇÃO BORGES LTDA
TOTAL	**1,211.91**		
831.543/2004	1,738.87	Approval Pending	VALE DO LÍTIO MINERAÇÃO LTDA
833.934/2006	879.54	Approval Pending	VALE DO LÍTIO MINERAÇÃO LTDA
830.455/2004	523.18	Approval Pending	EXOTIC MINERAÇÃO LTDA
TOTAL	**3,141.59**		
833.592/2006	1,000.00	Approval Pending	CLESIO A G MINERAÇÃO
TOTAL	**1,000.00**		
830.929/2017	858.65	Approval Pending	SALIT MINERAÇÃO LTDA
830.926/2017	594.09	Approval Pending	SALIT MINERAÇÃO LTDA
830.925/2017	643.64	Approval Pending	SALIT MINERAÇÃO LTDA
830.972/2022	20.76	Permit	NEOLIT MINERALS LTDA
830.975/2022	536.86	Application	NEOLIT MINERALS LTDA
831.200/2021	990.16	Permit	FOLIUM EMPREENDIMENTOS
830.833/2001	662.56	Application for Concession	JOSÉ SILVA LAPA
830.927/2017	912.05	Approval Pending	SALIT MINERAÇÃO LTDA
831.072/2022	727.87	Permit	NEOLIT MINERALS LTDA
832.361/2023	24.69	Application	NEOLIT MINERALS LTDA
832.362/2023	16.98	Permit	NEOLIT MINERALS LTDA
TOTAL	**5,988.31**		

4.4 Property Surface Rights

The owner of an Exploration Authorization ("EA") is guaranteed, by law, access to perform exploration fieldwork provided adequate compensation is paid to third-party landowners, and the owner of the EA accepts all environmental liabilities resulting from the exploration work.

According to Lithium Ionic Corp., agreements associated with the rights of the Baixa Grade property are in place. Under the legislation of the Brazil Mining Code, mineral resources belong to the State and are granted under mineral licenses issued by the ANM. Surface rights belong to the landowner, who, under the Mining Code, are guaranteed remuneration that may arise from a mineral deposit being developed on their property. This participation is usually negotiated between the mineral rights owner and the landowner, with the remuneration being a small percentage of a production royalty or a monthly rental fee.

If an agreement is not reached, there is legislation whereby the Government will arbitrate a settlement agreement to ensure that exploration and development of the mineral rights can advance. Under the legislation, a surface right owner does not have the legal right to inhibit the exploration or development of mineral resources in Brazil.

Lithium Ionic has acquired some of the lands inside the Baixa Grande Mineral Rights area. Table 4-2 presents the current surface rights acquisition status. Table 4-3 and Figure 4-4 give the surface owners list and their respective land inside the Baixa Grande Mineral Right.

Table 4-2: Acquisition Status - Piabanha and Sobradinho Farms

Property Name	Former Owner	Negotiation Status
Fazenda Piabanha	Luzia Teixeira Aleluia Cruz	Public Deed executed
Fazenda Sobradinho	José Álvaro dos Anjos Barros.	Sales Contract signed – Public Deed pending

Table 4-3: Surface Rights Owners.

Surface Ownership	Situation	Area (ha)
Antonio Marcos Pereira	Owned by Third Parties	40.0
David Raimundo de Barros	Owned by Third Parties	187.22
Estelith Ferreira Santana	Owned by Third Parties	128
Nascimenta Xavier Cruz	Owned by Third Parties	41.21
João de Deus Pereira	Owned by Third Parties	18.77
José Antônio Ferreira	Owned by Third Parties	23.35
José dos Santos Almeida	Owned by Third Parties	49.5
Jovino Ramos Nogueira and brothers	Owned by Third Parties	45.05
Juraci Batista Pereira	Owned by Third Parties	39.25
Lucileide Miranda de Oliveira Santos	Owned by Third Parties	53.39
Maria das Dores Pereira Souza	Owned by Third Parties	8.45
Nair Silva Dias	Owned by Third Parties	4.31
Nelson Santana da Cruz	Owned by Third Parties	20.02
Sebastião Gonçalves Filho	Owned by Third Parties	24.64
Valdeci José dos Santos and sisters	Owned by Third Parties	89.53
Florinda Miranda da Cruz	Owned by Third Parties	63
Welton Vicente Dias	Owned by Third Parties	14.81

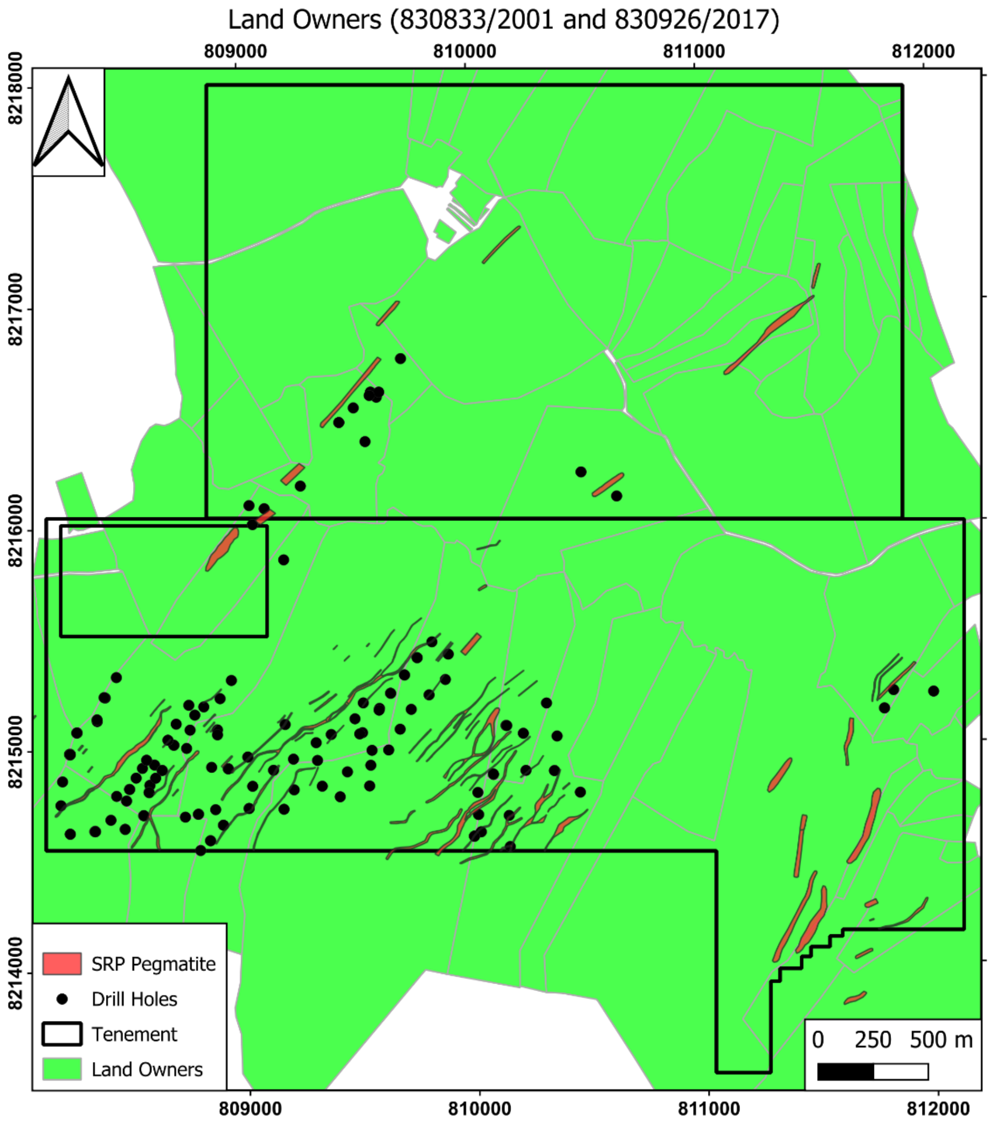


Figure 4-4: Baixa Grande Project Surface Rights Map.

4.5 Permits and Authorization

The Project currently entails only Exploration Permits; no other operational permits exist.

4.6 Environmental Considerations

The Project currently entails only Exploration Permits; no other operational permits exist.

4.7 Other Significant Factors and Risks

Neither the Authors of this Report nor Lithium Ionic Corp. are aware of any other significant factors or risks that may affect access, title, or the right or ability to perform work on the Property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Project is located in the northern region of the State of Minas Gerais, in the municipality of Salinas, approximately 100 kilometres north of Araçuaí and 640 kilometres north-east of Belo Horizonte. The project is well served by a network of public and private roads due to its proximity to the BR-251 and BR-116 highways. The project is accessible throughout the year by a network of arterial and secondary roads.

5.2 Climate

A semi-arid climate with high temperatures year-round characterizes the region. It has a temperature mean of 24 ºC and a low annual average rainfall of 823,4 mm. Severe drought occurs from May to September, and torrential and sporadic rains occur from November to March. The average summer temperature high is 31.8 °C, and the average winter low is 15.8 °C. Exploration activities are currently conducted year-round. It is expected that any future mining activities will also be year-round.

5.3 Local Resources and Infrastructure

A network of arterial and backcountry service roads accesses the Project area. The Company has established an on-site core logging and processing facility at the Project. One significant community are nearby, with a population of 40,000 or more.

Salinas is located approximately 75 km NNW of the town of Araçuaí (population: ~34,000), both connected by major sealed roads and serviced by the local municipal airports and by mobile phone network from the principal Brazilian service providers. Montes Claros is the closest major domestic airport, 230 km west of Salinas. The state of Minas Gerais is well-serviced by infrastructure, roads, hydroelectric power, and water. Also, the neighboring states of Espirito Santo and Bahia host the ports of Vitoria and Ilhéus, respectively (Figure 4-1).

5.4 Physiography

The topography of the Baixa Grande target is situated within a well-developed creek drainage known as the Bananal Valley. The overall relief varies from 850 meters at the highest elevations to 550 meters inland. It has steep escarpments on its flanks, while its interior is made up of domes and hills, ranging in height from 600 to 650 meters. The valley relief is capped by lateritic soils that can reach up to 5 meters at hill tops. To the north and south, the Bananal Valley is surrounded by high plateaus (called “chapadas” in Brazilian Portuguese) supported by metasiliciclastic rocks (Salinas Formation) and/or granites, or by mudstone-sandstone packages (São Domingos Formation).

The Project area is characterised by dense thorn scrub and medium height trees, except where it has been cleared for agriculture. The natural vegetation of the region is in a transition zone between Caatinga and Cerrado, where a mixture of species adapted to water regimes varying between dry and humid climates predominate.

The average annual precipitation is moderate compared to other regions of Brazil. The average annual measurements at the Salinas station are 823.4 mm, while the evapotranspiration averages are about 1,650 mm, a deficit of 830 mm/year, which characterizes it as a semi-arid environment.

The low precipitation can result in better geotechnical stability conditions than in tropical regions, with rainy summers (due to the lower soil erosion of the rain). In this sense, this natural stability condition is a positive evaluation for the overall risk management of the Baixa Grande target.

6 HISTORY

Neolit Strategic Minerals, a private Brazilian company acquired in March 2023 by Lithium Ionic Corp., conducted the first drilling program at the Baixa Grande target at the end of 2022 through a contract with Energold Drilling, performing 4,037.10 meters.

6.1 Historical Exploration

All works at the Baixa Grande target started in 2022 and do not have a historical exploration data for spodumene, although old diggings (“garimpos” in Brazilian Portuguese) for gemstones and columbite-tantalite are found in the region.

6.2 Historical Mineral Resource Estimates

Before Neolit’s exploration drilling program, several abandoned diggings (“garimpos”) for columbite-tantalite and gemstones (mainly tourmalines) in the pegmatites have been reported in the Bananal Valley, including the vicinities of the Baixa Grande village (Pedrosa-Soares and Oliveira, 1997; Paes et al., 2016; Barbosa, 2021). Historically, the best-known among them is the Zoé-Dim (or Bananal) Pegmatite, a zoned body rich in giant spodumene pseudomorphs (replaced by clay minerals) explored for Nb-Ta oxides, formerly reported by Paes et al. (2016) and detailed studied by Barbosa (2021) in her MSc thesis. However, several outcrops of spodumene-rich pegmatites (SRP) found by Neolit have not been explored before the current lithium-rush.

Following Neolit's assumption of responsibility for the mineral survey on the 830.833/2001 and 830.926/2017 tenements, detailed geological surveys were conducted, revealing several outcrops of spodumene-rich pegmatites. During Neolit's mapping efforts, 67 rock samples were collected for geochemical analysis. Approximately 15% of the analyzed samples returned significant lithium values, providing support for the exploration drilling program.

Neolit's exploration drilling program comprised 4,037.10 meters across 24 holes. This program allows to a subdivision of the Baixa Grande target into four sectors: Oeste, Sobradinho, Cubo, and Ju. Among these sectors, three—Oeste, Sobradinho, and Cubo—yielded excellent intercepts at depth. This outcome became a key factor in the acquisition of Neolit by Lithium Ionic.

7 GEOLOGICAL SETTING AND MINERALIZATION

The Baixa Grande target from the Salinas Project, lies in the Jequitinhonha River valley in northeast of Minas Gerais state, currently known as Brazilian Lithium Valley. The region sets on the Eastern Brazilian Pegmatite Province (EBPP), one of the largest pegmatite provinces around the world with ca. 150.000 km2 (cf. synthesis and references in Pedrosa-Soares et al., 2011, 2023).

The EBPP resulted from the magmatic and tectono-metamorphic events that formed the Araçuaí Orogen from the Early Ediacaran (ca. 630 Ma) to the Late Cambrian (ca. 490 Ma). The major EBPP pegmatite populations found within the Araçuaí Orogen have been grouped into twelve pegmatite districts that include residual pegmatites (representing late silicate melts released by fractional crystallization of parent granites) and/or anatectic pegmatites (formed directly from partial melting of country rocks). Among them, the Araçuaí Pegmatite District includes hundreds of residual pegmatites of distinct subclasses, types, and sub-types (B, Be, Cs, Li, Sn, Ta) of the rare-element class.

They comprise two main groups of rare-element pegmatites:

i. the generally thick (up to 100 m), zoned, complex LCT (Lithium-Cesium-Tantalum) pegmatites with several lithium minerals (e.g., elbaite, lepidolite, Li-phosphates, petalite and/or spodumene) and other rare-element minerals (e.g., beryl, Bi-minerals, cassiterite, pollucite, schorlite, Ta-minerals), displaying roughly concentric to irregularly-shaped primary zones (marginal, graphic or wall, and intermediate zones, and quartz cores) cut by albite-bearing replacement bodies and fracture fillings with gem-bearing pockets;

ii. the relatively thinner, unzoned to poorly zoned, spodumene-rich pegmatites (SRP) with rather simple mineralogical assemblages that include spodumene (up to 35 vol%), albite, perthite, quartz, and muscovite (together forming up to 90-95 vol%), and accessory minerals, such as cookeite, Li-phosphates, petalite, cassiterite, Nb-Ta oxides, graphite, Fe-Mn oxides, and zabuyelita.

Both LCT pegmatites and SRP bodies commonly show unidirectional solidification textures outlined by minerals (e.g., mica, spodumene, tourmaline) oriented roughly orthogonal to the contacts with the host rocks (or to any other lower temperature surface inside the pegmatite, such as host rock xenoliths).

The rare-element pegmatites of the Araçuaí District are related to granitic intrusions, mostly composed of peraluminous (S-type), sub-alkaline to alkaline, muscovite-bearing leucogranites with pegmatoid cupolas, of the Cambrian (535-500 Ma.) post-collisional (post-tectonic) G4 supersuite of the Araçuaí Orogen.

The Salinas Project is in the Curralinho Pegmatite Field, a pegmatite population emerging as an outstanding target for exploring spodumene-rich pegmatites in the Araçuaí District, only after the Itinga Pegmatite Field that contains the most important lithium deposits of Brazil since the 1950's, both in terms of economic resources and geological potential. As with other lithium-rich pegmatite populations worldwide, the favorable geological conditions for the outstanding abundance of both SRP and LCT pegmatites in the Curralinho Field are given by: i) the relatively low-pressure and high-temperature regimes of the regional and contact metamorphisms, recorded by the dominant country rocks (quartz-mica schists with andalusite and/or cordierite and/or sillimanite); and ii) the profusion of two-mica granite intrusions with pegmatoid cupolas emplaced in relatively shallow crustal levels. The Itinga Pegmatite Field includes the spodumene mines and deposits of CBL (Companhia Brasileira de Lítio) and Sigma Lithium, as well as Lithium Ionic's properties of its Itinga Project, such as the Bandeira and Outro Lado spodumene deposits.

The lithium ore bodies exploited, since the early 1990's, in the CBL's underground mine display a closely spaced swarm of relatively narrow (6 m thick on average) but long (up to 700 m along strike) non-zoned spodumene-rich pegmatites. The Lithium Ionic's Bandeira deposit, located just beside the CBL's mine, also show the same pattern of a dense swarm of unzoned spodumene-rich pegmatites, with some dikes reaching up to 25 meters thick (cf. PEA Bandeira, Lithium Ionic, 2023). In the Sigma Lithium properties, where several large spodumene-rich pegmatites are found (e.g., Barreiro, Murial, and Xuxa), an open pit mine is currently being developed on the Xuxa SRP deposit (15 m thick x 1800 m long x 500 m).

Regardless of their size, most pegmatites in the Curralinho field are (sub-)parallel to the prominent NE-SW structural trend defined by the regional ductile foliation (the S1 schistosity: NE strike / NW dip) and a late spaced cleavage (S2: NE strike / SE dip). However, flat and high-angle dip joint systems may also have potential to host some spodumene-rich pegmatites.

Also following the regional NE-SW structural trend, the Baixa Grande target comprises NE-striking swarms of spodumene-rich pegmatites (SRP) discordantly emplaced along a SE-dipping fracture system (the S2 spaced cleavage), as well as a few spodumene-mineralized pegmatites hosted by late flat-lying joints. The Baixa Grande pegmatites are tabular bodies with convex lens-shaped terminations, arranged in tight and staggered swarms. This target is in the early stages of drilling. Many of the drilled SRP bodies in the Baixa Grande target are open both along strike and dip.

The synthesis presented in 7.1, 7.1.1, and 7.2 were compiled from Pedrosa-Soares et al. (2009, 2011, 2020, 2023), Paes et al. (2016), and references quoted on those publications, whose repeatedly citations are removed for easier readability of the following text.

7.1 Regional Lithium History and Geology

The Salinas Project lies in the Eastern Brazilian Pegmatite Province (EBPP), located in terranes of the Araçuaí Orogen (Figure 7.1 and Figure 7.3). The EBPP, one of the largest pegmatitic populations in the world with c. 150,000 km2, contains pegmatite districts located in eastern Minas Gerais (c. 90% of the whole province), southeastern Bahia, and Espírito Santo States of Brazil.

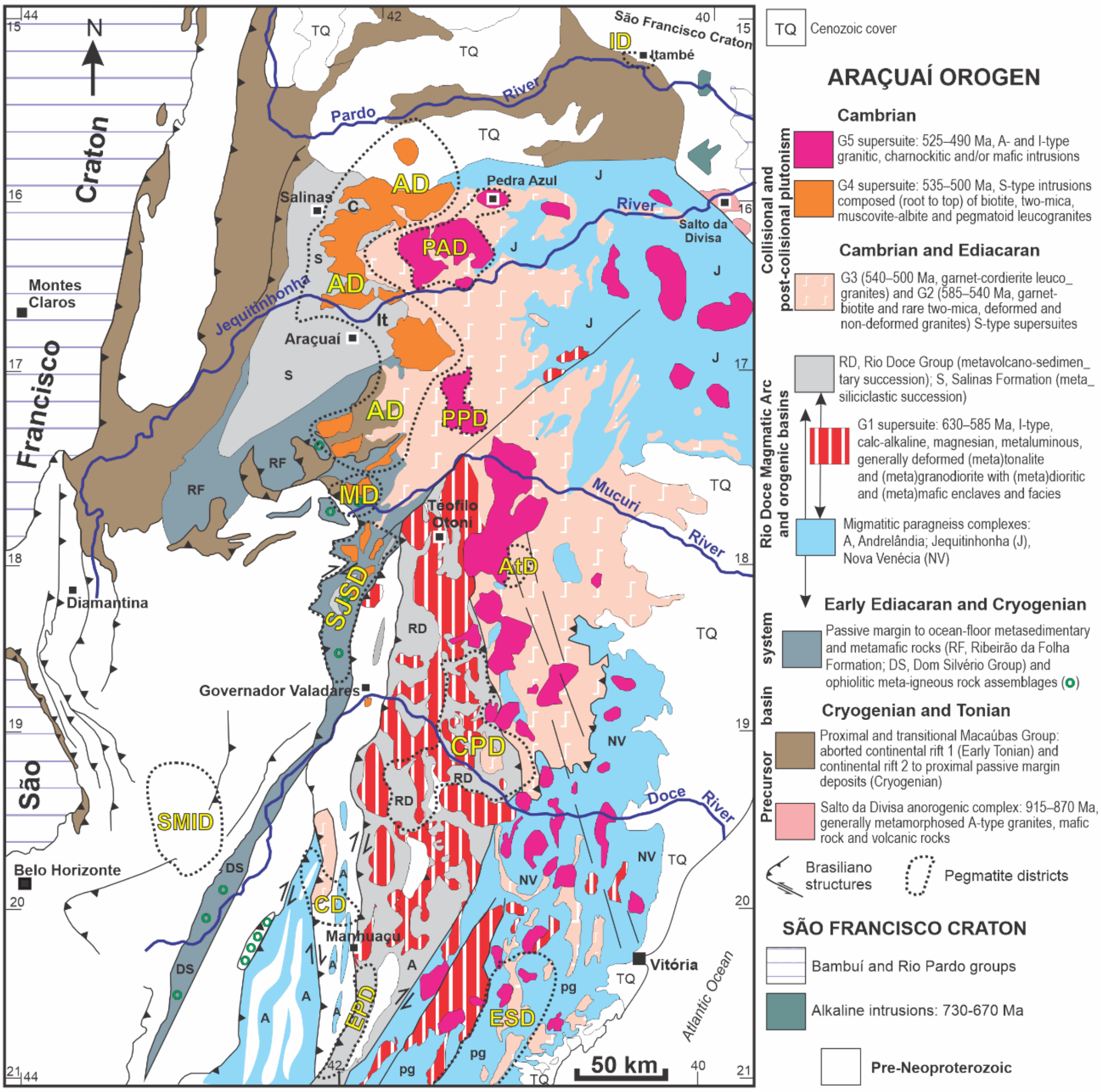


Figure 7-1: Simplified geologic map of the Araçuaí Orogen (modified from Pedrosa-Soares et al., 2020), highlighting the granite supersuites and pegmatite districts of the Eastern Brazilian Pegmatite Province (cf. Pedrosa-Soares et al., 2011, 2023): AD, Araçuaí, including the Curralinho (C) and Itinga (It) pegmatite fields; AtD, Ataléia; CD, Caratinga; CPD, Conselheiro Pena; ESD, Espírito Santo; ID, Itambé; MD, Malacacheta; PAD, Pedra Azul; PPD, Padre Paraíso; SJSD, São José da Safira; SMID, Santa Maria de Itabira. (Figure from Pedrosa-Soares et al., 2023).

The Eastern Brazilian Pegmatite Province is the most important region in the history of pegmatite studies and development of lithium deposits in Brazil. Pegmatite gemstones are officially known in Brazil since the last decades of the 17th century, when green tourmalines, initially mistaken for emeralds, were found by the explorer Fernão Dias Paes Leme in the region of São José da Safira, a pegmatite district very rich in gem-quality elbaite (Li-bearing tourmaline). Long after, in the first decades of the 19th century, pioneer naturalists and geologists, such as Eschwege, Spix, Martius, and Saint-Hilaire, described pegmatite gem deposits located in the Jequitinhonha and Doce river valleys. In 1818, Spix and Martius reached the headwaters of the Calhauzinho and Piauí rivers in the Araçuaí region (Figure 7-4), searching for the gemstones' primary sources, particularly chrysoberyl (then called "chrysolite" locally) that was already mined there. They found a "white granite with little mica, but rich in black tourmaline" (i.e., pegmatite). At that time, spodumene (discovered and named by the Brazilian mineralogist José Bonifácio de Andrada in a volume of the Journal der Chemie, 1800) was already called "rotten chrysolite" by pioneer prospectors and gemstone diggers ("garimpeiros" in Brazilian Portuguese) of the Jequitinhonha Valley. In 1866, Charles Hartt described the N45E-trending structure of the mica schists hosting very coarse-grained "granite" veins between Araçuaí and Itinga. In 1882, Costa Sena published the first paper directly referring to spodumene (also called "triphane" at that time) in the Middle Jequitinhonha region, after identifying "andalusite, cymophane (chrysoberyl) and triphane with sharp edges, in sands and gravels from streams of the Piauí river valley" and suggested that the primary deposits would also be located there. Several spodumene occurrences, among other pegmatite minerals, of the Middle Jequitinhonha Valley are described by Luiz Caetano Ferraz in his "Compendio dos Mineraes do Brasil", published in 1928.

The importance of pegmatites as economic mineral deposits greatly increased in Brazil from the Second World War, due to the large production of mica, beryl, and quartz to supply the military industry of allied countries, to the end of the Cold War in early 1990's. Just after the Second World War, in 1946, the largest pegmatitic populations of Brazil were grouped into provinces by Glaycon de Paiva. Among them the Eastern Brazilian Pegmatite Province was first defined. Since then, more than one thousand pegmatites have been mined there for gemstones, cassiterite, Li and Be ores, Nb-Ta oxides, industrial minerals (K-feldspar, muscovite, albite, quartz), collection and rare minerals, dimension stone, and minerals for esoteric purposes.

Historical milestones in the discoveries and mining of lithium deposits in the Araçuaí-Itinga region were reported by Haroldo de Sá in his PhD thesis (1977). According to him:

The discoveries and production of cassiterite, lepidolite, and amblygonite in pegmatites of the Piauí river valley (e.g., Fumal, Generosa, Jenipapo, and Urubu) by the Estanífera do Brasil and Produco companies dated back to the early 1950s. Although spodumene has been known for a long-time by gem diggers ("garimpeiros"), who called it "cambalacho" or "crisólita podre" (i.e., rotten chrysolite in reference to its similarity to chrysoberyl), its commercial production only started at the end of the 1960s at the Cachoeira mine (then owned by Companhia Estanífera do Brasil) to supply the increasing demand of the national market.

Petalite, formerly called "escória branca" (white scoria) and very often mistaken for feldspar, was correctly identified at the end of the 1960's and immediately mined for exportation by the Companhia Estanífera do Brasil until 1972, followed by Companhia Arqueana de Minérios e Metais Ltda. Around 1977, this mining company has more than twenty distinct pegmatite bodies producing petalite, spodumene, amblygonite, lepidolite, beryl, cassiterite and columbite-tantalite."

For his PhD thesis (1977), Haroldo de Sá compiled map, sections and other data from the archives of the Companhia Arqueana de Minérios e Metais Ltda. and produced the first geochronological data for the local granites and pegmatites (whose similar ages, around 500 Ma, is evidence of a genetic link between them). He also produced the first geochemical data (K, Rb, Cs) for minerals of non-economic and pegmatites with mineralization of petalite, spodumene, lepidolite and/or pollucite. His spatial interpretation of the distribution and zoning of different Li-rich pegmatites, even with present-day knowledge, remains realistic.

Khalil Afgouni, an outstanding pioneer of the lithium mining in Brazil and the owner of Companhia Arqueana de Minérios e Metais Ltda, together with Haroldo de Sá published a farseeing article entitled "Lithium Ore in Brazil" in the prestigious magazine Energy in 1978 (vol. 3, pp. 247-253). In the article, they predict that "another new use (for that metal) is in lithium batteries for electric cars and, if this application becomes reality, Brazil will be a big consumer, ranking at same level as the most developed countries in the world, with the advantage of being one of few countries producing its own raw material." Although this is not yet a full reality, the remarkable increase in lithium ore production in the Jequitinhonha Lithium Valley is a result of the invaluable heritage of Arqueana's discoveries of world-class lithium deposits.

The assets were later bought by CBL (Cachoeira mine) in the early 1990’s and, more recently, by Sigma Lithium (Xuxa mine, and other spodumene and petalite deposits such as Barreiro, Maxixe, Murial, and others). That heritage continues to drive new companies to the region, whose exploration efforts have led to the discovery of subsurface spodumene deposits in areas lacking outcrops, such as the Bandeira and some Baixa Grande deposits of Lithium Ionic.

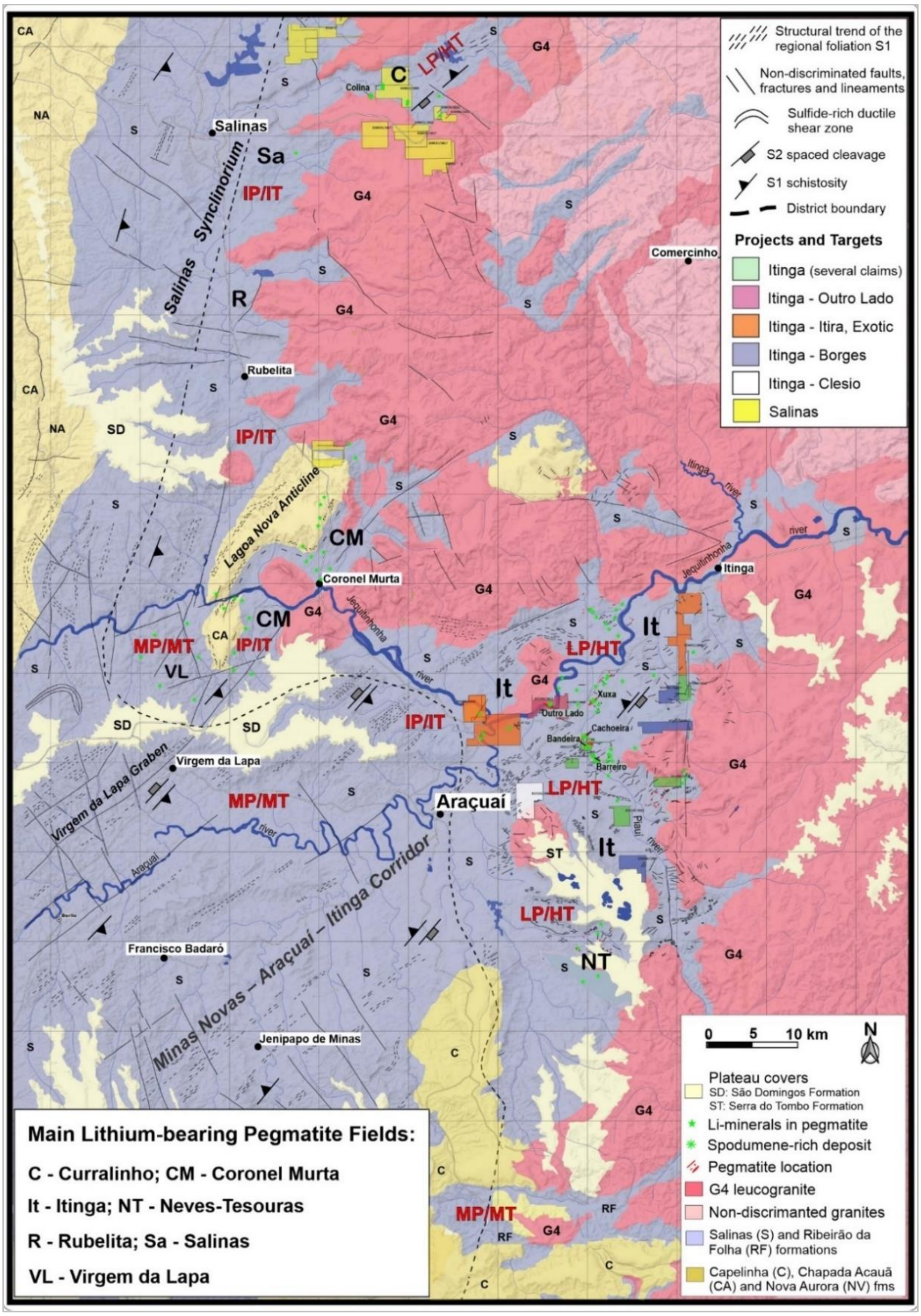


Figure 7-2: Geological map of the Araçuaí Pegmatite District, highlighting lithium-bearing pegmatite fields (see inbox), major tectonic domains (names in italics on map), metamorphic regimes according to relative pressure (P) and temperature (T) conditions

(LP/HT, low-P/high-T; IP/IT, intermediate-low P and T; and MP/MT, medium P and T), spodumene active mines (Cachoeira, Xuxa) and main spodumene deposits: Bandeira and Outro Lado (Lithium Ionic), Barreiro (Sigma), and Colina (Latin Resources). Map modified and updated by Pedrosa-Soares et al. (2023) based on the district map by Paes et al. (2016).

Since the early 1980s, the region encompassing the Eastern Brazilian Pegmatite Province (EBPP) has been completely covered by systematic geological mapping (in 1:100,000 scale) and experienced an outstanding increasing in scientific studies supported by robust analytical data. That allowed genetic and metallogenetic links between pegmatite populations and the tectono-magmatic events of the regional geological evolution to be established. In fact, the EBPP is the result of the magmatic and tectono-metamorphic events that formed the Araçuaí Orogen from the Early Ediacaran (ca. 630 Ma) to the Late Cambrian (ca. 490 Ma).

These events comprise the regional deformation, metamorphism and partial melting of sedimentary and volcanic successions deposited in the Tonian-Cryogenian precursor (rift to passive margin) basin system and the Ediacaran orogenic (arc-related) basins (Figure 7-3), as well as of the continental basement. The melting events resulted in the production of huge volumes of orogenic granitic rocks and thousands of pegmatites grouped into five supersuites (G1 to G5; Figure 7-1,Table 7-1).

The sedimentary and volcano-sedimentary successions involved in the tectono-metamorphic-anatectic processes that generated granites and pegmatites show two contrasting distributions of U-Pb ages for detrital grains of zircon (Figure 7.2). One is a classic multimodal age spectrum of a basin system evolved from continental rift to passive margin, represented by the Macaúbas Group and Jequitinhonha Complex.

The other age distribution shows an unimodal spectrum typical of orogenic basins largely filled by material from a rather dominant zircon source (e.g., an active magmatic arc), representing the Salinas Formation and Rio Doce Group that host most Li-bearing pegmatites in the EBPP (Figure 7-1). The Salinas Formation, comprising quartz-mica schist (metapelite) with lenses of calc-silicate rock (metamarl), metawacke (metasandstone) and metaconglomerate, is the main host unit of Li-rich pegmatites in the whole EBPP, including the spodumene-rich pegmatites of the Baixa Grande Target.

Tectono-metamorphic events and the G1 to G5 granitic supersuites of the Araçuaí Orogen play distinct roles in relation to pegmatite abundance, distribution, genesis, and metallogenetic specialization, imposing important prospecting constraints with regards to metallic potential of distinct pegmatite populations along the EBPP (see 7.2).

The G4 is the most important granitic supersuite related to Li-rich pegmatites, followed by the G2 supersuite, while the G5 and G1 supersuites are related to Be-rich pegmatites generally free of or poor in Li-minerals. Tourmaline-bearing pegmatites are widespread in the EBPP, except in some clusters of Be-rich and Li-rich pegmatites.

The G4 intrusions and batholiths show the classical distribution of granitic facies, from pluton root to top, found in other Li-rich pegmatite districts around the world, comprising biotite leucogranite, two-mica leucogranite, muscovite leucogranite, albite leucogranite and pegmatoid granite. Apatite, beryl, tourmaline, and garnet occur in the pegmatoid granites, and muscovite-albite leucogranites. The Salinas Formation is also the main host unit of G4 intrusions associated with Li-rich pegmatites (Figure 7-1).

7.1.1 Pegmatites

Granitic pegmatites represent silica-saturated magmas variably rich in H2O and bearing fluids, as well as in other hyperfusible (fluxing) components (e.g., Li, Na), crystallized in rather closed chemical systems (cf. Cerný, 1991; London, 2008). The EBPP comprises the two known genetic types of pegmatites, both formed during the evolution of the Araçuaí Orogen: i) the anatectic pegmatites generated directly from the partial melting of country rocks; and ii) the residual pegmatites, representing late silicate melts released by fractional crystallization of parental granites. Genetic affiliation and other criteria allow pegmatite districts to be distinguished in the EBPP (Figure 7-3; Table 7-2).

Table 7-1: Main features of the orogenic igneous supersuites of the Araçuaí Orogen (simplified from Pedrosa-Soares et al. 2024).

Supersuites	G_1	G_2	G_3	G_4	G_5
Ages (Ma)	630 – 585	585 – 540	540 – 500	535 – 500	525 – 490
Lithotypes	mostly tonalite and granodiorite, minor diorite to gabbronorite, with biotite, amphibole and/or pyroxenes; poor in pegmatites	mostly biotite-garnet syenogranite to alkali feldspar granite, garnet-rich monzogranite to tonalite, and garnet-two-mica granite, locally with sillimanite; associated with external rare element pegmatites	alkali feldspar granite to syenogranite with cordierite and/or garnet and/or sillimanite, free of or poor in biotite; poor in pegmatites	from pluton root to top: biotite granite, two-mica leucogranite, muscovite and/or albite and/or schorlite granite, pegmatoid granite; associated with external rare element pegmatites	alkali feldspar granite to granodiorite, orthopyroxene-bearing charnockitic rocks, basic (norite) to ultrabasic rocks, and beryl-topaz pegmatites
Field Relations	batholiths and stocks, generally rich in dioritic to mafic enclaves and facies, showing solid-state deformation and migmatization, local well-preserved igneous fabrics, associated with the arc-related metavolcano-	batholiths, stocks and stratoid bodies, showing solid-state deformation, metamorphism and migmatization, with common restites and xenoliths of metasedimentary rocks, and localized well-preserved igneous fabrics	mostly autochthonous, non-deformed patches, veins, and lodes of G_3 leucosome, and minor stocks, free of the regional foliation, hosted by migmatites with G_2 paleosome	balloon- to stratoid-shaped intrusions, post-kinematic in relation to the regional ductile foliation, locally imposing late deformation on the regional structural trend	balloon-shaped plutons and multiple intrusions, locally rich in mafic and/or microgranular enclaves with magma mixing features, and norite-rich bodies, post-kinematic in relation to the regional ductile foliation

	sedimentary Rio Doce Group			(circumscribed intrusions)	
Geochemical Signatures	metaluminous to slightly peraluminous, magnesian, calcic to alkali-calcic, medium- to high-K, expanded calc-alkaline series	strongly to weakly peraluminous, calc-alkalic to sub-alkalic (K > Na)	peraluminous, sub-alkalic (K > Na)	peraluminous, sub-alkalic (K > Na) to alkalic (Na > K)	metaluminous to slightly peraluminous, ferroan, high-K calc-alkalic, minor tholeiite
Petrogenetic Type	metaluminous I-type, locally peraluminous I-type	peraluminous S-type, locally peraluminous I-type	S-type	S-type	A-type and I-type
Tectonic Stage	pre-collisional to early collisional magmatic arc	late pre-collisional to late collisional	late collisional to post-collisional	post-collisional	post-collisional

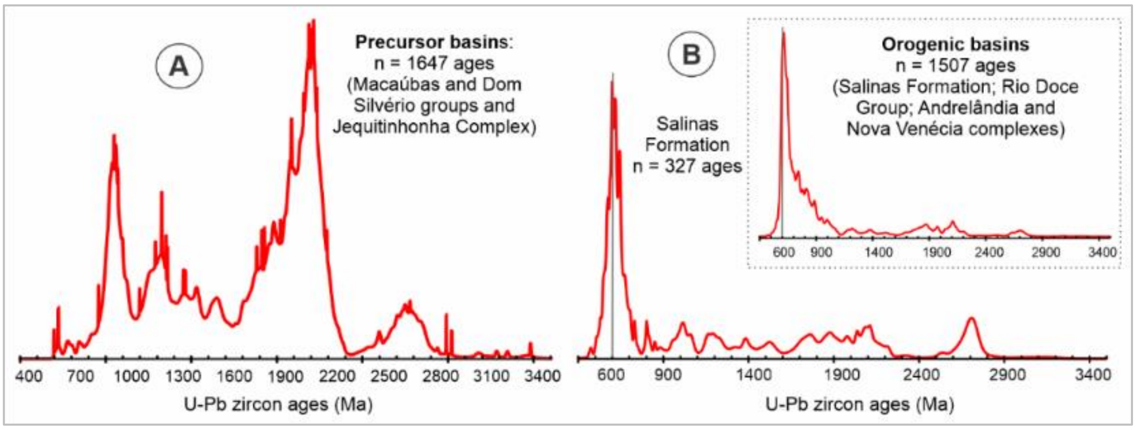


Figure 7-3: Distributions of U-Pb ages for detrital zircon grains from metamorphosed sedimentary and volcanic rocks (Figure from Pedrosa-Soares et al., 2024).

(A) precursor basins (e.g., Macaúbas Group and Jequitinhonha Complex), and (B) orogenic basins (e.g., Salinas Formation, Rio Doce Group) of the Araçuaí Orogen within the Eastern Brazilian Pegmatite Province.

The anatectic pegmatites are coarse-grained quartz-feldspathic bodies (i.e., granitic leucosomes) hosted by migmatitic gneisses and micaschists, mostly formed in the collisional tectono-metamorphic event (585 – 540 Ma) and in the post-collisional thermal event (540 – 490 Ma). Therefore, their spatial distribution, and genetic and metallogenetic features are directly related to the melted country rocks. Conversely, the residual pegmatites, especially those enriched in rare elements, have restricted spatial distributions and genetic links directly related to the distinct granite types from which they ultimately inherited their geochemical characteristics and metallogenetic specializations (Figure 7-3 and Figure 7-4).

Therefore, residual pegmatites released from peraluminous, subalkalic to alkalic, hydrous, S-type, two-mica leucogranites formed from the partial melting of metasedimentary rocks might have a rather distinct metallogenetic specialization (e.g., richer in Li, Cs, Ta, Sn, and P) in relation to residual pegmatites (e.g., richer in Be, F, and Fe) from metaluminous, high-K calc-alkalic, ferroan, relatively anhydrous, A-type, amphibole-biotite granites formed from the partial melting of mainly igneous rocks. The first case (S-type granites) refers to Li-bearing pegmatites associated with the G4 and G2 supersuites, while the second (A-type granites) stands for the Be-bearing (but Li-free) pegmatites comprised by the G5 supersuite.

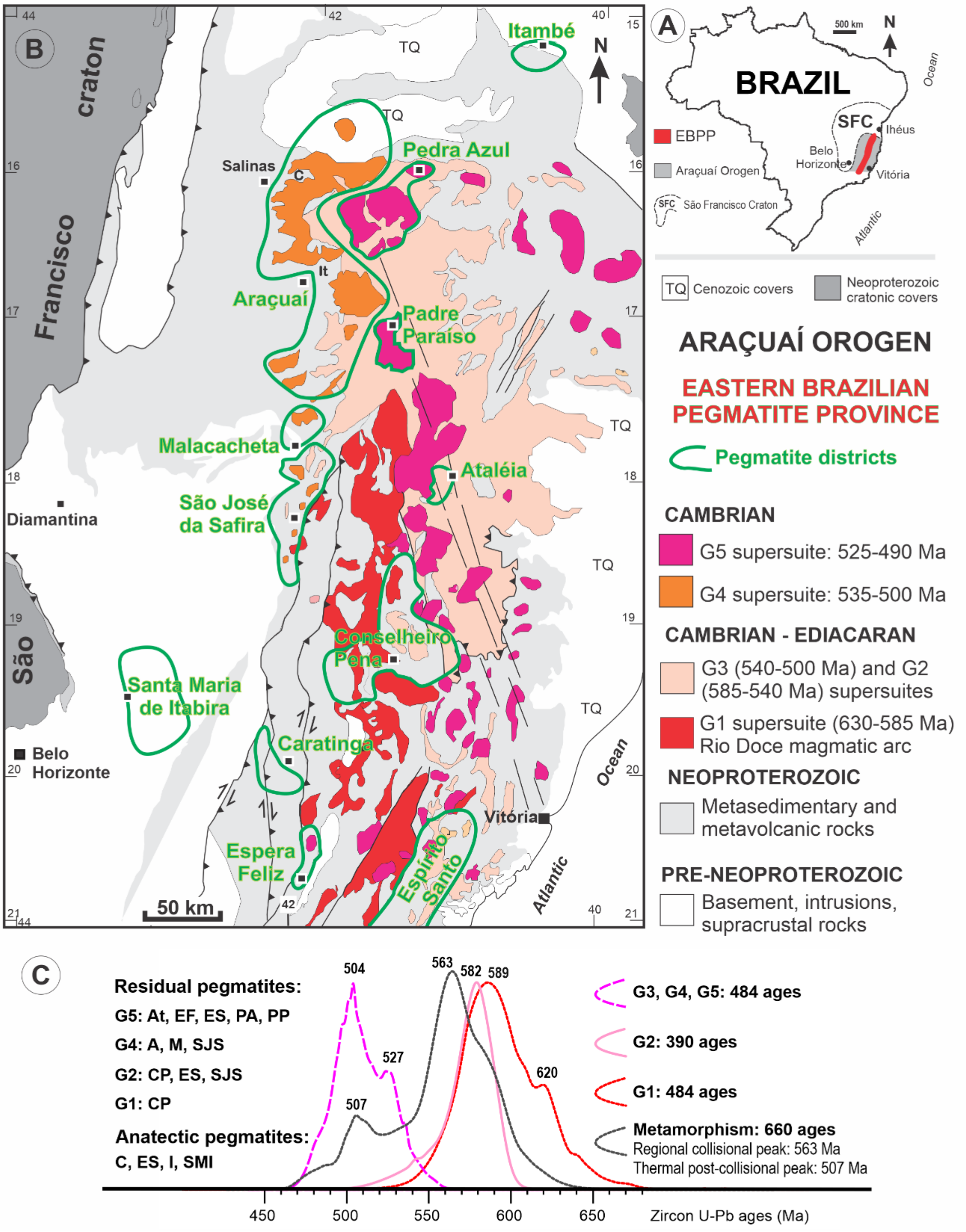


Figure 7-4: The Eastern Brazilian Pegmatite Province. A) Location of the Eastern Brazilian Pegmatite Province (EBPP) in Brazil and related to the São Francisco Craton. B) Simplified geological map highlighting the granite supersuites (G1 to G5) and EBPP pegmatite districts: A, Araçuaí, including the Curralinho (C) and Itinga (It) pegmatite fields; At, Ataléia; C, Caratinga; CP, Conselheiro Pena; EF, Espera Feliz; ES, Espírito Santo; I, Itambé; M, Malacacheta; PA, Pedra Azul; PP, Padre Paraíso; SMI, Santa Maria de Itabira; SJS, São José da Safira. C) Distribution of zircon U-Pb ages from orogenic

granite supersuites (G1 to G5), regional metamorphism and post-collisional thermal events, correlated to pegmatite districts. (Figure from Pedrosa-Soares et al., 2024).

Table 7-2: Features of the Main Pegmatite Districts of the Eastern Brazilian Pegmatite Province (Pedrosa-Soares et al., 2024, updated after Pedrosa-Soares et al., 2011. (*) Cerný et al. (1991, 2012). LCT, Lithium-Cesium-Tantalum; and NYF, Niobium-Yttrium-Fluorine pegmatites).

District names and ages (Ma)	Historical and present-day mineral production, and rare minerals	Genetic affiliation; class, subclass, type, subtype, and family (*)	Parent and host rocks
Itambé 508 Ma	K-feldspar, quartz crystals, mica, beryl, columbite, monazite	anatectic; muscovite-rare element, REE, allanite-monazite, NYF	biotite-hornblende gneisses, sillimanite-feldspar-mica schists
Pedra Azul 501 Ma	quartz, beryl (aquamarine), topaz	residual; REE, beryl-topaz, NYF	A-type G5 granites
Padre Paraíso 519 Ma	quartz, beryl (aquamarine), topaz, quartz crystals, goshenite, chrysoberyl	residual; REE, beryl-topaz, NYF	A- and I-types G5 granites and charnockites
Araçuaí 535-500 Ma	Greenish to pinkish spodumene, petalite, lepidolite, Li-phosphates, cookeite, cassiterite, columbite-tantalite, industrial minerals (perthitic K-feldspar, albite, muscovite), tourmalines (elbaite, schorlite), beryl ore and gems (aquamarine, morganite), pollucite, quartz crystals, cleavelandite, herderite and other rare phosphates, topaz, bismuthinite	residual; mostly rare element and minor muscovite-rare element, Li, beryl, complex (spodumene, petalite, lepidolite, elbaite, amblygonite), albite-spodumene (SRP), albite, LCT	S-type G4 leucogranites; low-P/high-T (andalusite, cordierite, sillimanite) to medium-PT (garnet, staurolite, kyanite, sillimanite) mica schists to paragneisses, metasandstones, calc-silicate rocks, meta-ultramafic rocks
Ataléia 502 Ma	quartz crystals, beryl (aquamarine), topaz, chrysoberyl	residual; REE, beryl-topaz, NYF	A- and I-types G5 granites and charnockites
São José da Safira 545-490 Ma	tourmalines (elbaite, schorlite), industrial minerals (perthitic K-feldspar, albite, muscovite), beryl ore and gems (aquamarine, heliodor, morganite), lepidolite, Li-phosphates, spodumene, garnet, cleavelandite, columbite-tantalite, cassiterite, bertrandite, microlite, zircon, rare phosphates	residual; muscovite-rare element and rare element, Li, beryl, complex (elbaite, lepidolite, Li-phosphates, spodumene), LCT	S-type G4 and G2 leucogranites; medium-PT (garnet, staurolite, kyanite, sillimanite) mica schists to paragneisses, metasandstones, calc-silicate rocks, meta-ultramafic rocks

Conselheiro Pena 570-545 Ma	industrial minerals (perthitic K-feldspar, albite, muscovite), tourmalines (elbaite, schorlite), beryl ore and gem, spodumene (kunzite), lepidolite, Li-phosphates, quartz crystals, cleavelandite, columbite-tantalite, cassiterite, rare phosphates (arrojadite, barbosalite, brasilianite, childrenite, correianevesite, eosphorite, roscherite, vivianite, etc.)	residual; muscovite-rare element and rare element; Li, beryl, complex (elbaite, Li-phosphates, lepidolite, spodumene), LCT	S-type G2 (and I-type G1?) granites; medium-PT to intermediate low-P (garnet, staurolite, cordierite, kyanite, sillimanite), mica schists to paragneisses, metasandstones, calc-silicate rocks, meta-ultramafic rocks
Malacacheta 535-500 Ma	muscovite, beryl, chrysoberyl; alexandrite, sapphire	residual; muscovite-rare element, beryl, LCT; and anatectic to hydrothermal processes	S-type G4 leucogranites; mica schists, meta-ultramafic rocks, migmatites
Santa Maria de Itabira, 545-500 Ma	emerald, alexandrite, aquamarine, amazonite	quartz-feldspathic hydrothermal deposits, and pegmatites	ultramafic schists, banded iron formations, migmatites
Caratinga, 570 Ma	kaolin, corundum (sapphire, ruby), beryl	anatectic; abyssal, ceramic	migmatitic paragneisses
Espera Feliz, 500	quartz crystals, beryl (aquamarine), topaz	residual; REE, beryl-topaz; NYF	G5 granites
Espírito Santo 570-500 Ma	kaolin, quartz, beryl (aquamarine), topaz, tourmalines (and spodumene?)	anatectic; ceramic; and residual; REE, beryl-topaz, NYF (and LCT?)	migmatitic paragneisses, G5 (and G2?) granites

The EBPP was subdivided into twelve pegmatite districts based on the mineral production, genetic and metallogenetic affiliation and classification, parental granite type, host rocks and metamorphic regime, and crystallization ages of a relatively large and clustered pegmatite population (Figure 7-4 and Table 7-2). Most of them are districts of residual pegmatites of the rare element class, distinguished by their affinities with the LCT (Lithium-Cesium-Tantalum) or NYF (Niobium-Yttrium-Fluorine) geochemical-metallogenetic families that, in turn, are related to distinct types of parental granites. Beryl-topaz (NYF) pegmatites cluster in districts almost completely circumscribed or very close to A-type and I-type G5 intrusions, encompassing granitic and igneous charnockitic (orthopyroxene-bearing) rocks with features of magma mingling-mixing involving mafic melts.

Contrastingly, complex LCT pegmatites and albite-spodumene-rich pegmatites (SRP) are found in the external aureoles of S-type intrusions mostly composed of two-mica leucogranites with pegmatoid cupolas, generally hosted by metasedimentary rocks of the greenschist to amphibolite facies. Among the EBPP Li-bearing districts, the Araçuaí Pegmatite District stands out by having the largest historical and current production of lithium ore and the only world-class spodumene deposits of Brazil. Those deposits include the CBL, Sigma, and the newly discovered deposits by other companies, such as the Bandeira and other spodumene-rich deposits of Lithium Ionic Corporation.

The Araçuaí Pegmatite District includes several LCT pegmatite fields distinguished by their mineral production, pegmatite types and subtypes, and pressure-temperature (P-T) conditions of both the regional and contact metamorphisms (Figure 7.4). Besides complex LCT pegmatites, spodumene-rich pegmatites (SRP) are known in the Curralinho, Itinga, Neves-Tesouras and Salinas pegmatite fields. However, the Itinga and Curralinho pegmatite fields remain an the most important for spodumene production and prospecting, owing to the outstanding abundance of non-zoned to poorly zoned SRP ranging from a few to dozens of meters thick, hundreds to a few thousand meters in length along strike, and dozens to hundreds of meters in downdip width. Many spodumene orebodies mined by Arqueana, CBL and Sigma, as well as those discovered by Lithium Ionic at Bandeira and other targets, belong to the SRP (or albite-spodumene) type.

7.2 Structural Geology

In the Araçuaí Pegmatite District (Figure 7.4), the present-day structural framework was established after four deformation events (D1, D2, DG, and DNt). Two of them (D1, D2) are directly related to the regional tectono-metamorphic evolution of the Araçuaí Orogen in the Ediacaran-Cambrian. The third deformation event (DG) was caused by the widespread and voluminous intrusions of Cambrian G4 granites that caused thermal metamorphism and significant structural disturbance on the regional fabrics along areas relatively close to granitic stocks and batholiths (Pedrosa-Soares et al. 1987, 1993, 2011; Alkmim et al., 2006; Santos et al., 2009; Peixoto et al., 2017). Much later, the last deformation event (DNt) resulted from neotectonics reactivation in the Late Tertiary (Saadi and Pedrosa-Soares, 1989). The Ediacaran-Cambrian deformation events (D1, D2, and DG) formed the structural framework that passively hosts the rare element pegmatites in the Araçuaí District (Figure 7-2). The much younger neotectonic deformation (DNt) reworked prior structures in upper crustal levels in the Late Tertiary (Miocene), forming normal faults and graben basins (e.g., the Virgem da Lapa Graben, Figure 7-2filled by the fluvial to lacustrine sandstone-mudstone piles of the São Domingos Formation that reach more than 100 m in thickness (Saadi and Pedrosa-Soares, 1989; Pedrosa-Soares, 1997). Locally, neotectonic faults may cut and displace blocks with pegmatite deposits.

The D1 deformation results from regional tectono-metamorphic processes imposed by compressive stresses during the collisional stage (580-540 Ma) of the Araçuaí Orogen. Megascopic to macroscopic D1 structures are asymmetric tight folds with long limbs and short hinges, parasitic folds, and ductile shear zones related to thrust ramps and oblique to transcurrent strike-slip domains.

The macroscopic to microscopic D1 structures include the main regional planar structure that evolved from a cleavage to the schistosity S1 (Figure 7-5) that contains the L1 mineral/stretching lineation. S1 is generally (sub)parallel to the layering (S0) along D1 fold limbs, becoming an axial-plane surface in fold hinges (Figure 7-5). Anastomosed and S-C foliations characterizes higher strain shear zones syn-kinematic to S1. Although it generally is a very penetrative structure, the S1 foliation also provides host surfaces for pegmatites.

Distinct metamorphic regimes related to the D1 deformation of schists and gneisses rich in micas have been recognized in the region encompassing the Araçuaí Pegmatite District (Pedrosa-Soares et al., 1984, 1993, 1996; Costa et al., 1984; Costa, 1989; Santos et al., 2009; Peixoto et al., 2017). In the western and southwestern sectors of the region (Figure 7-2), the S1 schistosity shows syn-kinematic (syn-S1) assemblages with Fe-rich garnet (almandine), staurolite, kyanite and/or sillimanite. Such index-minerals series is typical of a medium pressure and medium temperature (MP/MT) metamorphic regime (Figure 7-2). This, together with quantitative geothermobarometric data, characterize the M1 metamorphic event as a syn-collisional (syn-D1) Barrovian-type (MP/MT) metamorphism dating between 575 – 550 Ma. P and T increase from c. 3.5 kbar at 450 °C in the garnet zone at the southwest of Francisco Badaró, passing northeastwards through the staurolite, kyanite and sillimanite zones, and reaching up to 8.5 kbar at 650 °C at the southeast of Coronel Murta (Figure 7-2).

In the northeastern and northern sectors of the region, the S1 schistosity shows syn-kinematic (syn-S1) assemblages with biotite, Mn-rich garnet (spessartine), andalusite, cordierite and/or sillimanite. Such index-minerals series is typical of a low pressure and high temperature (LP/HT) metamorphic regime (Figure 7.4). From the most northeastern andalusite zone to the southwest of Itinga, quartz-feldspathic leucosomes with aplitic to pegmatitic textures formed from the breakdown of muscovite along the S1 foliation of cordierite-quartz-mica schists. Northeastwards, through the andalusite-cordierite, cordierite-sillimanite, sillimanite, and K-feldspar zones, increasing metamorphism and partial melting of quartz-mica schists formed migmatitic paragneisses in the eastern tip of the Itinga Pegmatite Field (Figure 7.4). Regionally, the metamorphic event (M2) records a low-P/high-T metamorphism with pressures from 2 kbar to 5.5 kbar under temperatures from 400 °C to 700 °C, at around 540-530 Ma. The M2 metamorphism reached partial melting conditions on quartz-mica schists of the Salinas Formation with increasing anatexis rates that formed leucosome-rich migmatites (diatexites) in the easternmost sector of the Araçuaí Pegmatite District. This implies that, in deeper crustal levels, the widespread anatexis on the Salinas Formation could have produced large volumes of S-type granitic magmas in the late collisional to post-collisional stages of the Araçuaí Orogen. Indeed, the time interval of the M2 metamorphism (540-530 Ma) fits well with the oldest ages of G4 granites (535-525 Ma). This, together with the fact that the M2 metamorphism culminated in partial melting of quartz-mica schists and paragneisses in the easternmost Araçuaí Pegmatite District, indicate that the S-type G4 magmas were formed from the anatexis of thick metasedimentary packages in deep levels of the Salinas Formation.

Along the boundary between the M1 and M2 metamorphic domains (Figure 7-2), the syn-S1 mineral assemblages include almandine and/or staurolite and andalusite and/or cordierite, characterizing an intermediate-low pressure (Buchan-type) metamorphic regime (IP/IT, Figure 7-2) transitional between the M1 Barrovian-type (MP/HT) and the M2 low-P/high-T (LP/HT) metamorphic regimes found in the Araçuaí Pegmatite Districts. Bearing in mind the relations between distinct pegmatite populations, their metallogenetic specializations and metamorphic regimes (Cerný, 1991; Cerný et al., 2012), such metamorphic characterization is of great importance for prospecting different rare element pegmatites, as Li-rich pegmatites are typically found in terranes with relatively low-P/high-T metamorphism, as occurs in the Curralinho Corridor at the Baixa Grande Target in the northern part of the Araçuaí Pegmatite District (Figure 7-2).

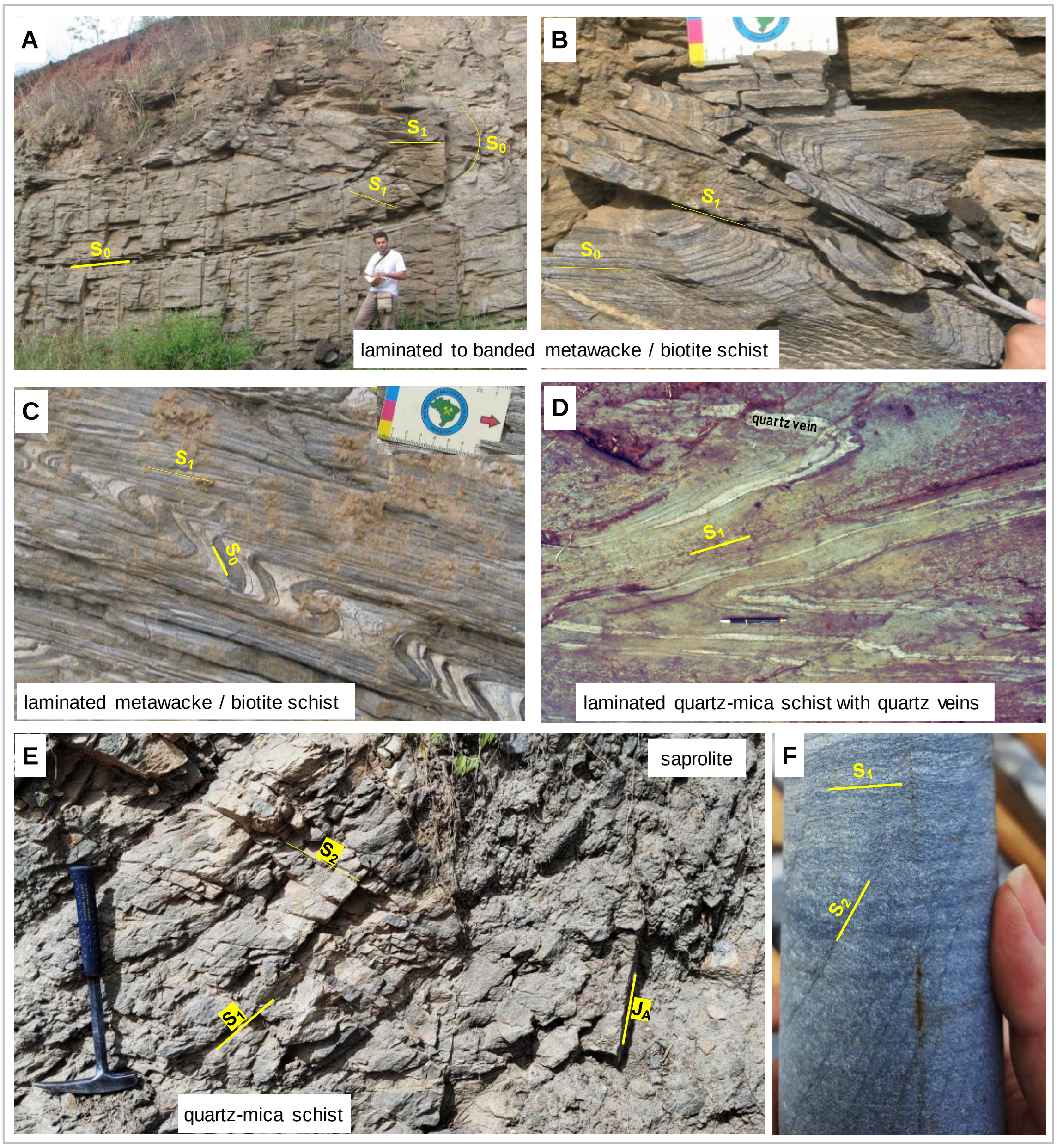


Figure 7-5: Photos from outcrops and a drill core showing structures of the deformation events D1 and D2 on the Salinas Formation in the Araçuaí Pegmatite District. (A and B) Large tight fold (A) with a hinge (B) showing the sedimentary layering (S0) cut by the low-angle dip to flat axial-plane S1 cleavage. C) Tight folds with limbs transposed by S1 foliation. D) Hinges of tight folds with metamorphic quartz veins in quartz-mica schist. E) Spaced cleavage S2 cutting the schistosity S1, and sub-vertical joints (JA) cutting across both S1 and S2 in the Bandeira area. F) S2 spaced foliation marked by recrystallized mica, cutting the S1 schistosity in a drill core sample from the Bandeira deposit.

The D2 deformation developed from the late collisional to the post-collisional stages of the Araçuaí Orogen, when increasing decompression conditions, imposed by the orogen gravitational collapse, gradually replaced the tangential D1 compressive stresses. In the Araçuaí Pegmatite District, the D2 deformation comprises mostly brittle structures, such as the S2 spaced cleavage, joint families, and normal faults, as well as large open folds (flexures). The spacing between surfaces of the S2 cleavage ranges from less than one centimeter to decimeters (Figure 7-5). Locally, S2 may be very well developed in micaschists, becoming a tight crenulation cleavage to schistosity. The S2 spaced cleavage and other brittle structures, as being more open surfaces than the S1 schistosity, provided host surfaces for Li-rich pegmatites, generally the thicker ones, in the Itinga Pegmatite Field.

The latest Cambrian deformation event (DG) was caused by the intrusion of large volumes of S-type magmas that formed the G4 granites and cut across and disturbed the regional framework imprinted by the D1 and D2 deformations. The DG event deformed the regional structural trend of the host rocks around granitic plutons, forming radial fractures irradiating from the granitic plutons, and imprinting ring-shaped fracture systems that reworked regional structures around the intrusions. All these DG structures can host late orogenic rare element pegmatites.

During emplacement and cooling, the G4 plutons caused contact metamorphism on their country rocks and released residual silicate melts that formed pegmatites that either crystallized within the parental granite or migrated outwards and were hosted by D1, D2 and DG structures of the Salinas Formation and other metasedimentary units. While barren and beryl-bearing pegmatites are found both within parental G4 granites and country rocks, the Li-bearing pegmatites have been only found in places rather far from (> 1 km) granite massifs, emplaced in the Salinas Formation and other metasedimentary units. The G4 batholith emplaced along the whole eastern boundary of the Araçuaí Pegmatite District is formed by multiple coalescent plutons and places an eastern limit for the occurrence of Li-bearing pegmatites.

Regionally, the deformational events formed large structures with distinct implications for the occurrence and structural control of pegmatites in the Araçuaí District, such as the Salinas Synclinorium, the Lagoa Nova Anticline,the Minas Novas - Araçuaí - Itinga Corridor, and the Curralinho Corridor (Figure 7-2).

The axial zone of the Salinas Synclinorium shows the best-preserved section of the Salinas Formation, comprising non-deformed to weakly deformed metawacke, metapelite and metaconglomerate, metamorphosed in the biotite and garnet zones of the low greenschist facies. This low-grade metasedimentary section reaches up to 2 km in thickness, with no evidence of pegmatite along the synclinorium keel. However, a Li-rich pegmatite cluster, including SRP bodies, was recently found to the east of the Salinas Synclinorium, along the andalusite-cordierite-bearing, low-pressure/high-temperature metamorphic zone of the Curralinho Pegmatite Field in the Baixa Grande Target and surroundings (Figure 7-2).

In the case of the Lagoa Nova Anticline, although there are LCT pegmatites emplaced along its structural surfaces, no SRP was yet found there, much probably due to the rather unfavorable pressure-temperature conditions of the regional and contact metamorphisms (between the medium PT (MP/MT) and intermediate PT (IP/IT) regimes).

The Minas Novas - Araçuaí - Itinga Corridor, in turn, plays a special role in the understanding of the structural control and the most favorable pressure-temperature conditions for the SRP occurrence in the Araçuaí Pegmatite District. That corridor has been characterized as a flower-shaped transpressive (during D1) to transtensive (during D2) structure (Pedrosa-Soares et al., 1993, 1996; Alkmim et al., 2006) with the S1 foliation dipping to SE in the NW flank, and to NW in the SE flank (Figure 7-2).

The regional metamorphism associated with the S1 schistosity gradually increases from southwest to northeast along the corridor, reaching c. 3.5 kbar at c. 550 °C at the andalusite-cordierite zone in the Bananal river valley, where the contact metamorphism was imposed by G4 granitic intrusions also under relatively low-pressure conditions. All those tectono-metamorphic and magmatic features favorable to SRP occurrence characterize the Curralinho Pegmatite Field, similarly to the Itinga Pegmatite Field where, still now, the most important spodumene deposits of Brazil are located, such as the CBL and Sigma mines, and the Bandeira deposit of Lithium Ionic.

7.3 Local Geology

The ongoing field mapping and exploration in the Baixa Grande area have revealed the existence of two geological units: (i) Salinas Formation, consisting of banded quartz-mica schists with lenses of calcsilicate rocks; and (ii) the G4 Supersuite, represented by an extensive pegmatite swarm, mainly comprising spodumene-rich pegmatites (SRP) and some barren pegmatites (Figure 7-6).

In the Baixa Grande target, the formerly known and the newly discovered spodumene-rich pegmatite (SRP) bodies have been grouped into distinct exploration sectors, named Oeste, Sobradinho, Cubo, Ju, and Noé sectors (Figure 7.6). These pegmatites share similar composition (all of them are spodumene-rich pegmatites) and field relations, striking along NE/SW and dipping to the SE (Figure 7-6. a, b), except for the sub-vertical dip of the Noé Pegmatite (according to information of the early drilling stage Figure 7-6.c). Additionally, the SRP bodies tend to be open both along strike and dip, with known lengths of hundreds of meters, thicknesses between 5 - 10 meters, and downdip widths up to 250-300 meters. Many already drilled SRP bodies are still open in length and width, which will certainly increase after further successful drilling campaigns.

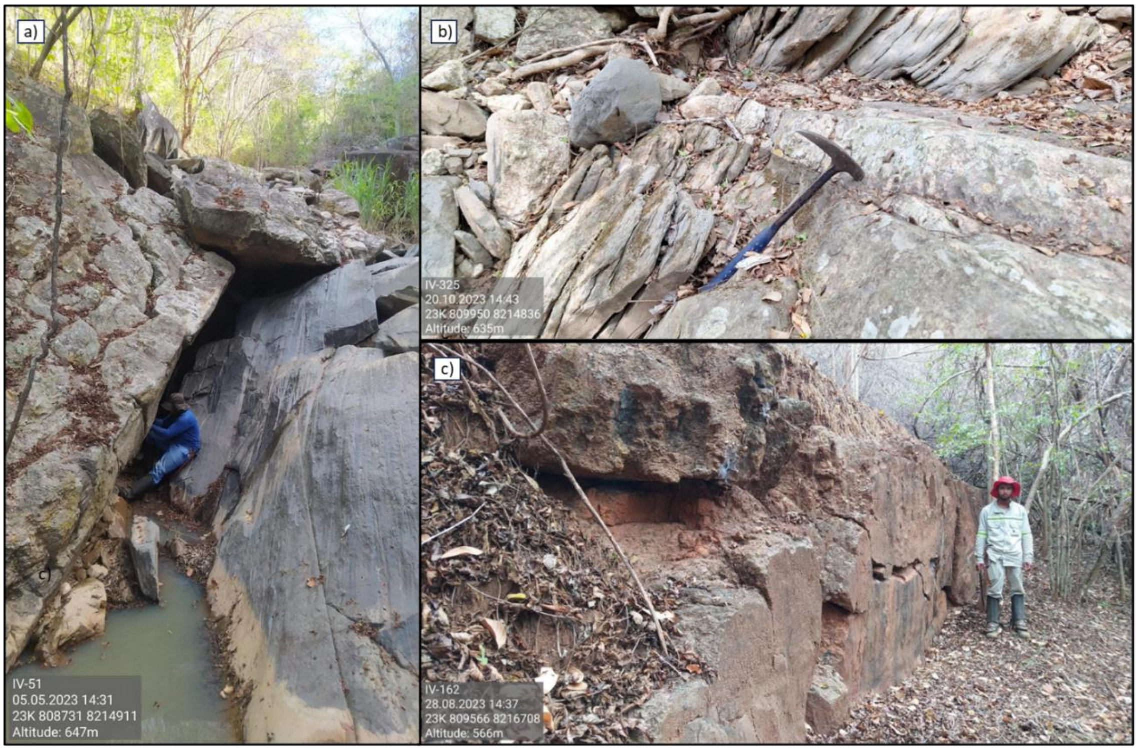


Figure 7-6: a) Spodumene-rich pegmatite (SRP) hosted by a fracture concordant to the strike but discordant to the dip of the banded quartz-mica schist of the Salinas Formation in the Oeste sector. b) Decameter-thick pegmatite host by a fracture discordant to the S1 foliation of the Salinas schist, Oeste sector. c) Outcrop showing the sub-vertical Noé Pegmatite.

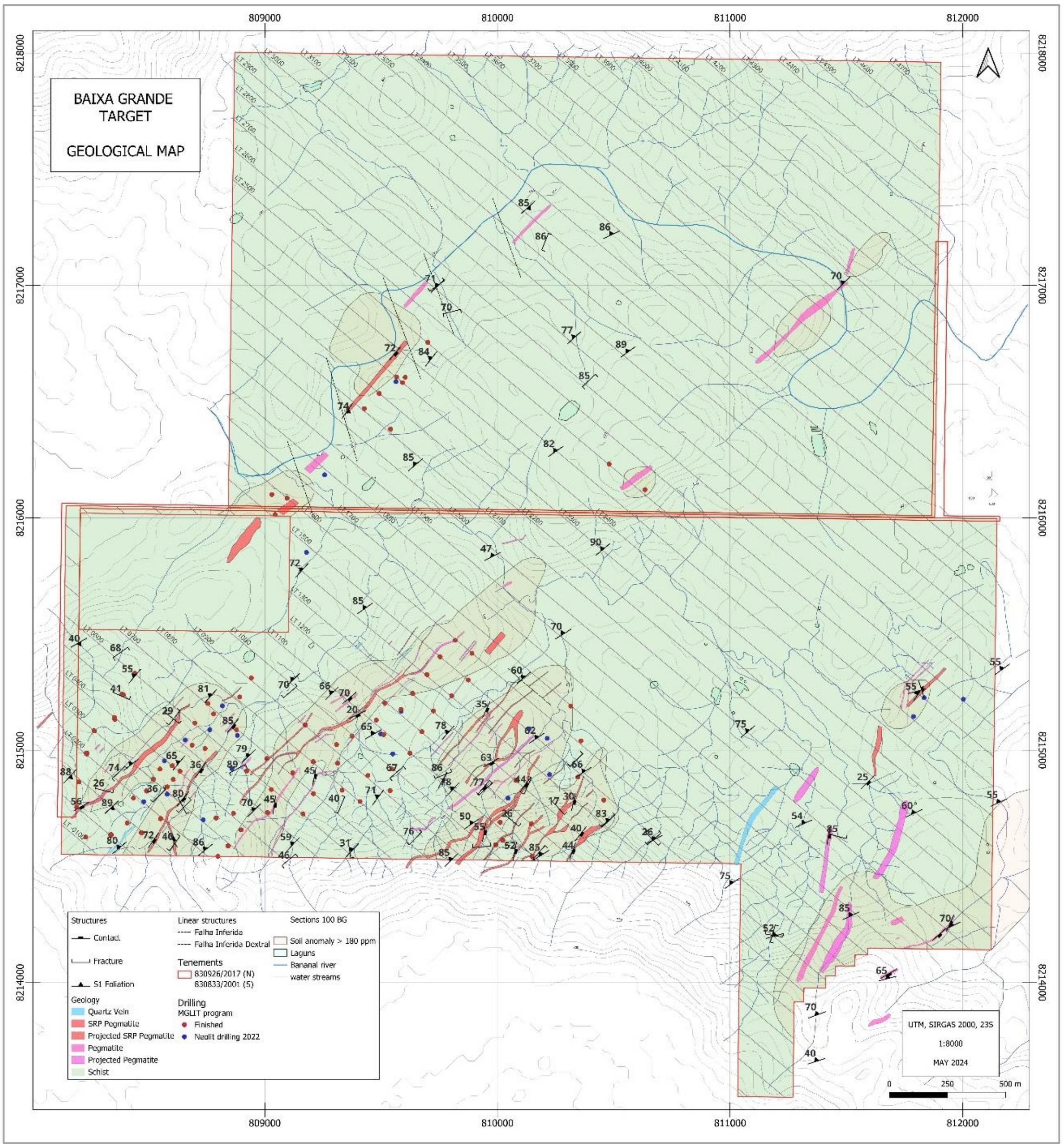


Figure 7-7: Geological map of the Baixa Grande Target, Salinas Project.

Owing to the significant weathering typical of tropical regions, the surface of the Baixa Grande area predominantly comprises recent residual soils resulting from the decomposition of the underlying rocks. The residual soil from the schists is an orange to brown fine-grained (silt to clay) eluvium. In contrast, the pegmatite soil is typically a whitish, fine to coarse-grained, powdered eluvium, with a composition dominated by quartz, kaolinized feldspar and altered muscovite. In cases of lithium mineralization, this soil can also contain fine-grained, partially to almost weathered spodumene fragments.

The Salinas Formation in the Baixa Grande area is composed by a package alternating package of quartz-rich and mica metasedimentary rocks. The quartz-rich rocks grade from massive to banded metawackes (metasandstones rich in mica-bearing matrix), generally represented by quartz-rich schists and quartz-mica schists of gray color and medium-grained texture. The quartz-rich rocks show more prominent fractures and a less penetrative S1 schistosity. The mica-rich rocks are mainly biotite schists and cordierite-biotite schists of dark gray color and fine-to-medium-grained texture. The mica-rich schists show a more penetrative S1 schistosity and tend to be less fractured than the quartz-rich rocks (Fig. Intercalations of calcsilicate rock (metamarl) are found in outcrops and drill cores (Figure 7-14).

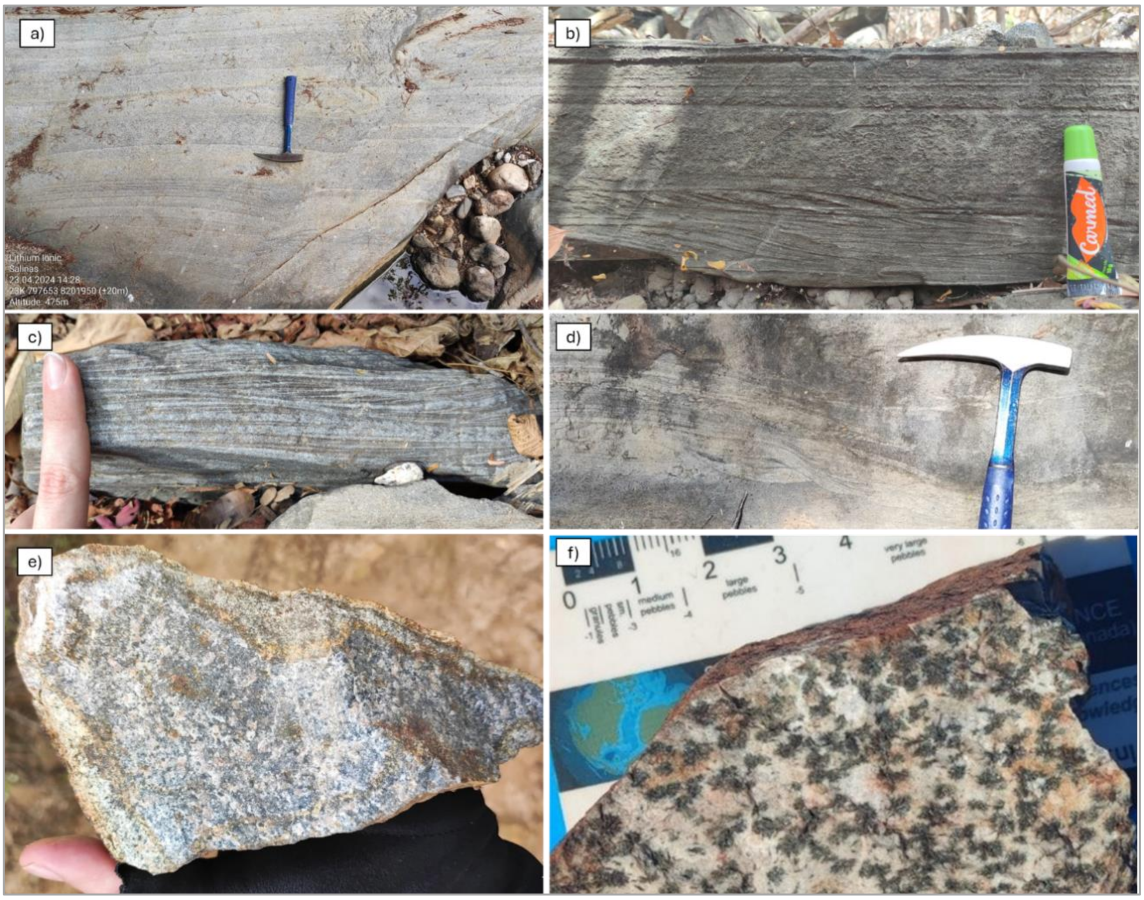


Figure 7-8: Rocks of the Salinas Formation observed in the Baixa Grande Target. a) Qtz-bt schist with more quartz and fault. b), c) and d) cross bedding on metawacke. e) and f) calcissilicatic blocks w/ grt, anf and chorl.

The mica-rich schists contain cordierite that are index-minerals of a metamorphic regime under relatively low-pressure and high-temperature conditions.

Figure 7-9: Cordierite on qtz-bt-schist

The pegmatites in the Baixa Grande target constitute a swarm of several dikes with variable thickness (metric to decametric). They are normally discordant to the Salinas Formation schistosity and in general occurs with NE strike, dipping SE. The nature of the contact between the pegmatite and the host rock is abrupt and sharp (Figure 7-10 a). Records of the pegmatites mineralized in lithium in the Baixa Grande area (i.e.: Spodumene-Rich Pegmatites – SRP) can be observed in some exposed outcrops that shows centimetric spodumene crystals, with whitish color when weathered and replaced to clay minerals (kaolin). Those SRP dikes commonly show euhedral prismatic crystals ranging in size from centimeters to decimeters with a preferred orientation indicative of mineral growth orthogonal to the borders of the dike, the unidirectional solidification texture (UST) that characterizes temperature and chemical gradients inward the igneous body (Figure 7-11 a,c).

Based on the observations from these outcrops, and the intercepts from the drill cores, it is possible to define the Baixa Grande mineralized bodies as non-zoned pegmatitic dikes with a simple and consistent mineralogy composed essentially of albite (32%), perthitic K-feldspar (28%), spodumene (15%), quartz (20%). Muscovite (3%) and other accessory phases (2%) are columbite-tantalite, cassiterite, apatite, garnet, pyrrhotite and malachite. The log analysis unveiled well-preserved spodumene crystals of variable sizes, typically centimeter-scale and disseminated throughout the rock. Notably decimeter-sized crystals also occur (Figure 7-10 d).

The discordant SRP pegmatites in the Baixa Grande area are dominantly concordant in strike with the regional schistosity (S1) but discordant in dip, with to the host rocks. The best example are the pegmatites bodies observed in the southern region (Figure 7-6 a / Figure 7-10 a,b), where large discordant bodies dips towards southeast. These bodies share identical mineralogical composition, leading to the interpretation as both products of the same coeval magmatism.


a)
b)
c)
d)

Figure 7-10: Rocks of the Salinas Formation observed in the Baixa Grande Target. a) Qtz-bt schist with more quartz and fault. b), c) and d) cross bedding on metawacke. e) and f) calcissilicatic blocks w/ grt, anf and chorl.

Figure 7-11: Spodumene-rich pegmatites (SRP) observed in the Baixa Grande Target. a) pegmatite of ca. 15 cm thick discordant to the regional foliation (S1) of the host schists in Oeste sector; b) weathered prismatic spodumene crystals that grew perpendicular to the

contact in Oeste sector; c) detail of the pegmatite of ca. 2 m with large crystals of spodumene in Cubo sector.

7.4 Mineralization Model

The Baixa Grande spodumene target is in the Eastern Brazilian Pegmatite Province (“EBPP”) that encompasses a very large region (about 150,000 km2) of the states of Bahia, Minas Gerais, and Rio de Janeiro. Approximately 90% of the EBPP is in the eastern part of Minas Gerais state.

The Baixa Grande target consists of a series of stacked shallow southeast dipping pegmatitic intrusions with largely prevailing spodumene-rich pegmatites. Individual intrusions range from metric to decametric. Lithium mineralization is related to discordant swarms of spodumene-bearing tabular pegmatites hosted by biotite-quartz schists. Macroscopically, spodumene can reach up to 28–30% of the pegmatite mass. The spodumene crystals together with microcline and albite contents range from 30– 35 vol%, with microcline content dominant over albite, quartz, and muscovite (that may reach up to 5–7% in volume) comprise more than 90 vol% of the SRP bodies. The pale green-colored spodumene crystals form elongates to roughly tabular laths, generally ranging from millimetric to centimetric in size, although decimetric spodumene crystals have also been observed both in outcrop and drill cores. Spodumene crystals are enveloped by the albite-microcline-quartz-rich matrix, and intergrowths of spodumene and quartz (squi), sometimes in association with muscovite, are common. Accessory minerals, such as columbite and tantalite form in association with albite and quartz. Late-stage minerals include pyrrhotite and pyrite.

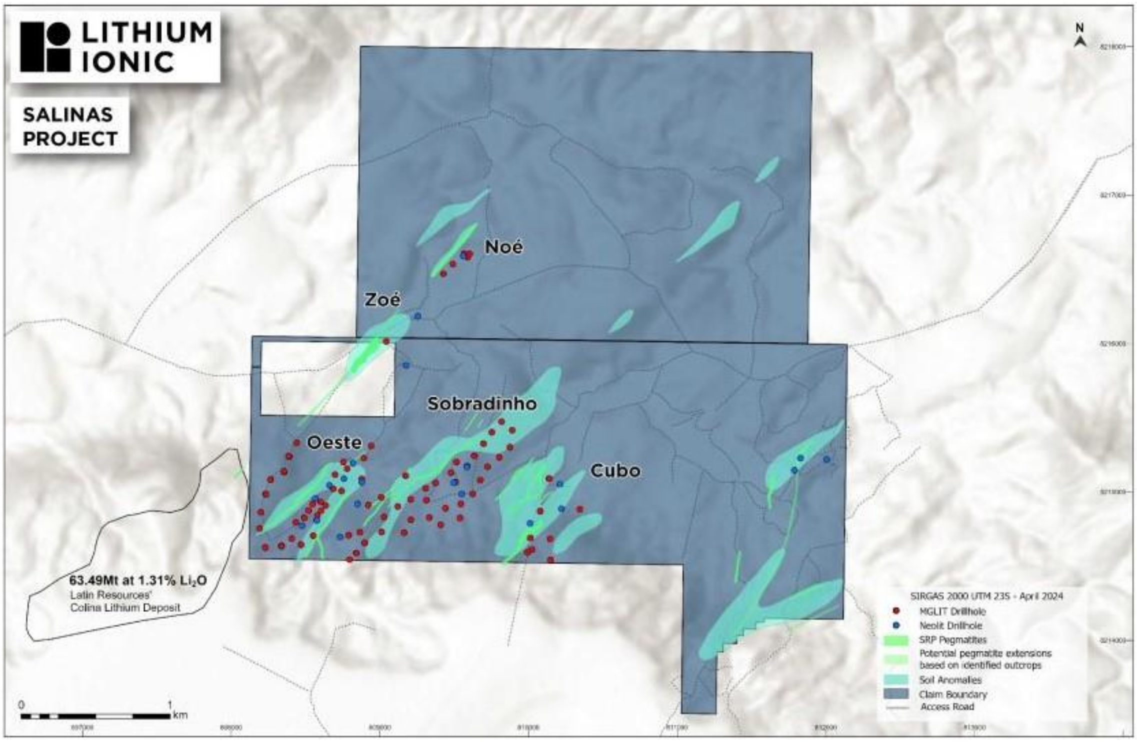
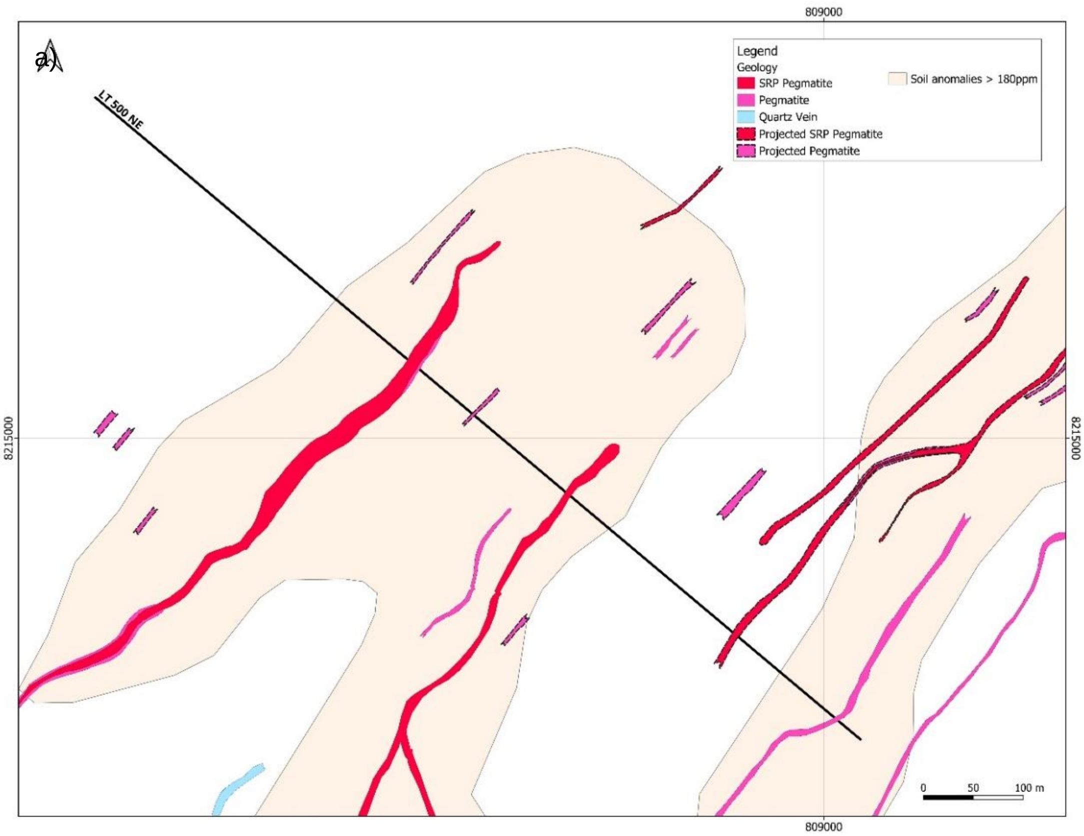


Figure 7-12: Location of the Baixa Grande target, april 2024. (https://www.lithiumionic.com/news/lithium-ionic-announces-maiden-mineral-resource-estimate-and-initiation-of-pea-at-its-salinas-project-minas-gerais-brazil-increases-regional-mineral-resources-by-45)

The SRP orebodies of the Baixa Grande target are non-zoned but rather inequigranular pegmatites composed of spodumene (on average 23 vol%), perthitic microcline, albite, quartz, and muscovite, generally totalizing more than 95% of the whole orebody volume. Cassiterite, columbite-tantalite, cookeite, garnet, malaquite, and sulfide are accessory minerals.

The spodumene-rich pegmatites of the Baixa Grande target were emplaced in the Salinas Formation that consists of banded cordierite-quartz-mica schist with intercalations of calcsilicate rock, recording P-T conditions suitable for SRP occurrence. In the Baixa Grande target, the main host surfaces for SRP bodies are the SE-dipping fractures of the Salinas Formation.

Following the regional NE-SW structural trend, the Baixa Grande target comprises SRP swarms of NE-striking orebodies mostly discordant hosted by schist with NW-dipping schistosity (S1). The Baixa Grande pegmatites are tabular bodies with convex lens-shaped terminations, arranged in tight and staggered (en-echellon) swarms, locally with branched connections linking ore bodies, as in the Oeste sector pegmatites.



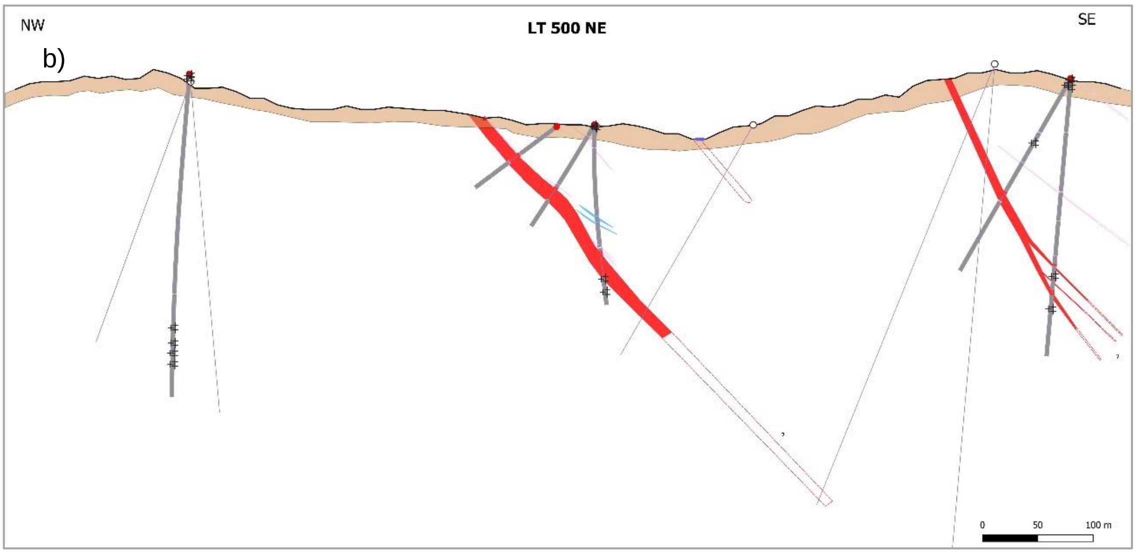


Figure 7-13: Spodumene-rich pegmatites shown in map (a) and cross-section (b). Simplified map showing the distributions of Li anomalies in soil and drilled SRP bodies projected to surface in the Baixa Grande Target; b) Simplified cross-section showing the SRP swarm discovered in depth by Lithium Ionic after exploration work and Neolit exploration geological mapping.

The host rocks of SRP orebodies in the Baixa Grande target deposit are banded to laminated cordierite-quartz-mica schists, locally containing disseminated sulfide, with intercalations of massive calcsilicate rocks (Figure 7-14 b). Most cordierite forms ellipsoidal (egg-shaped) stretched porphyroblasts syn-kinematic to the regional S1 schistosity (Figure 7-14a).

The banded to laminated quartz-mica schists represent metamorphosed sand-mud sediments, and the calcsilicate rocks are metamorphosed Ca-rich carbonate-mud sediments (marls). They show sharp contacts with the SRP orebodies that generally are discordant to the regional S1 foliation (often parallel to the compositional layering S0) (Figure 7-14 b). The host schists may be enriched in biotite, black to green tourmaline, and recrystallized cordierite along narrow (cm to dm) fringes of contact metamorphism imposed by pegmatites. Although the host schists may be anomalous in lithium content close to pegmatites, they show no Li-ore mineral.

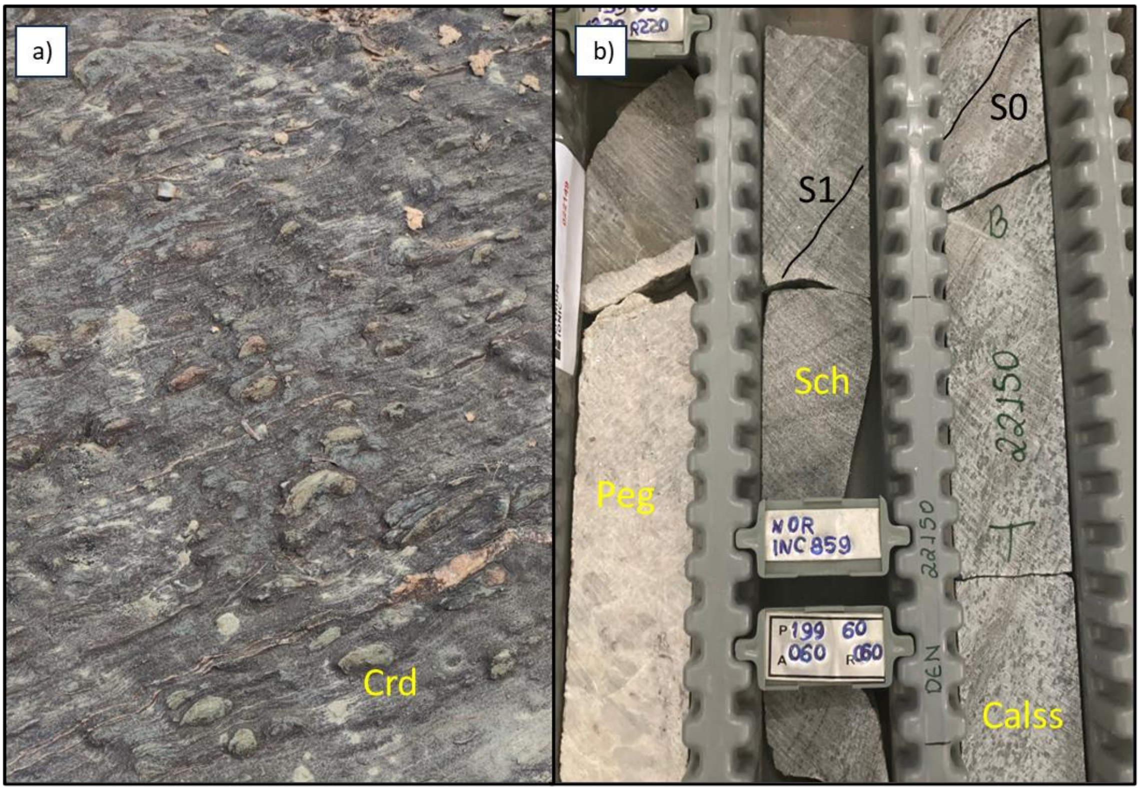


Figure 7-14: Photos from host rocks of spodumene-rich orebodies in the Baixa Grande Target. a) Cordierite-quartz-mica schist rich in porphyroblasts (nodule spots) of egg-shaped (ellipsoidal) cordierite (Crd) crowded of biotite and/or quartz inclusions and coronated by biotite. b) Calcsilicate rock with porphyroblasts of amphibole and grossular garnet with S0 contact with mica schist; S1 schistosity showing the banded to laminated cordierite-quartz-mica schist.

The Baixa Grande spodumene orebodies show a rather simple mineralogical assemblage (Figure 7-15), consisting of medium - to coarse-grained spodumene crystals, reaching up to 35 vol% on average, within a fine - to medium-grained matrix mostly composed of albite, perthitic K-feldspar (microcline), quartz, muscovite, summing up to 95 vol% of the total matrix. The scarce accessory (mainly garnet and Nb-Sn-Ta oxides) and secondary minerals (cookeite, sericite, Fe-Mn oxides, clay minerals) generally comprise less than 5 vol% in total. In drill cores, most spodumene crystals are free of hydrothermal and weathering alterations and very poor in mineral inclusions.

The thicker SRP bodies may show a lithium-barren and thin marginal zone rich in albite, generally rather discontinuous, followed inwards by a thick internal zone rich in disseminated spodumene (although spodumene may also be more ROM in some domains than others along the internal zone). Owing to the upward migration of H2O-rich fluids, flat-lying SRP sections close to the hanging-wall contact, as well as the top termination (“head”) of high-angle dip bodies, may show metasomatic units with miarolitic cavities that partially replaced the primary mineral assemblage. Many SRP bodies lack the external lithium-barren zone, showing disseminated spodumene along virtually the whole orebody.

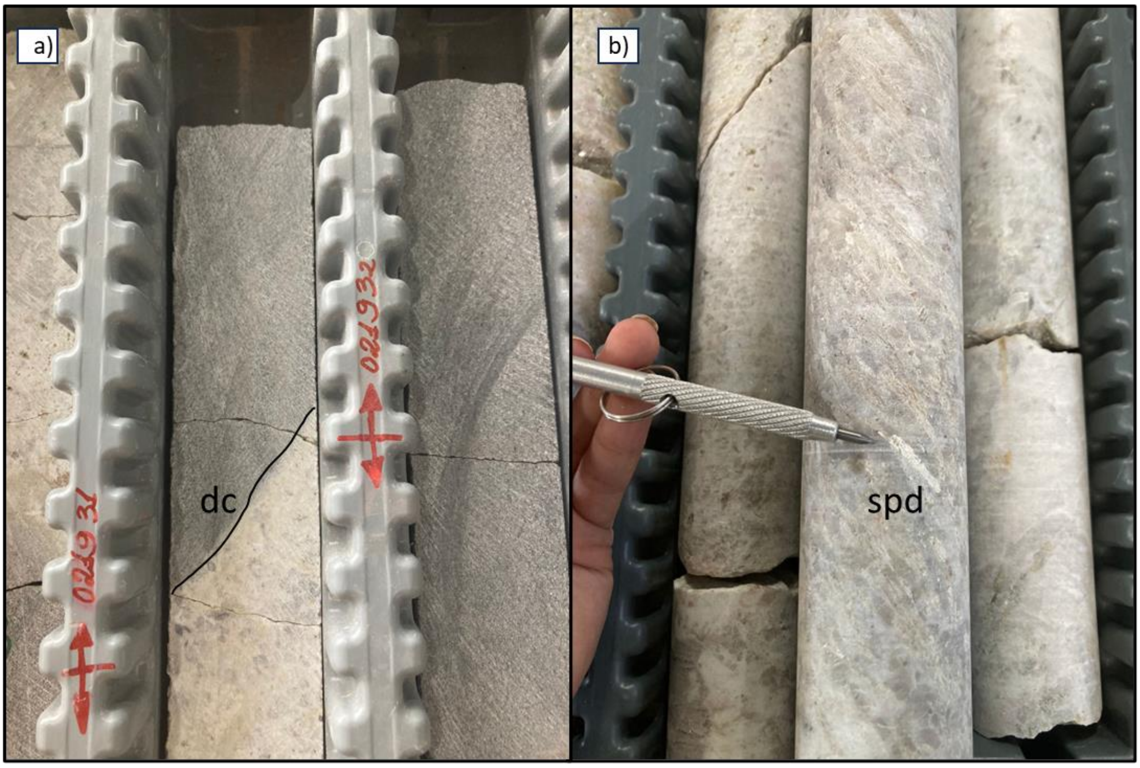


Figure 7-15: Drill core samples from spodumene-rich orebodies and their host rocks in the Baixa Grande Target. a) Segment of a non-zoned SRP body with a Discordant Contact (dc) between pegmatite and quartz-mica schist b) white spodumene laths disseminated in the quartz-albite-microcline-muscovite matrix.

8 DEPOSIT TYPES

According to the most accepted petrologic-metallogenetic classification of pegmatites, published by Cerný (1991) and updated by Cerný and Ercit (2005) and Cerný et al. (2012), all the spodumene-rich pegmatites found within the Baixa Grande deposit belong to the rare element class, Li subclass, and albite-spodumene type.

Although generally included in the LCT (Lithium-Cesium-Tantalum) family, the non- to poorly zoned spodumene-rich pegmatites (SRP) found in the Baixa Grande deposit, as well as all the orebodies mined in CBL's Cachoeira Mine since the 1990's (Romeiro and Pedrosa-Soares, 2005), the Xuxa and other spodumene-rich deposits of Sigma Lithium (Sá, 1977; Delboni et al., 2023), and the Bandeira and Outro Lado deposits of Lithium Ionic, are rather poor both in Ta and Cs when compared with the complex zoned LCT pegmatites (e.g., Generosa, Jenipapo, Murundu, Urubu and others) found in the Araçuaí Pegmatite District (cf. Sá, 1977; Romeiro, 1998; Quéméneur and Lagache, 1999; Dias, 2015) and elsewhere (e.g., Cerný 1991; London, 2008; Cerný et al., 2012).

The SRP deposits consist of non-zoned to poorly zoned spodumene-rich pegmatites with spodumene reaching up to 35 vol% on average, and the total modal content of spodumene, albite, K-feldspar, quartz, and white mica (muscovite and/or Li-rich mica) summing up more than 90 vol% of the whole body (Figure 8.1). Therefore, SRP bodies are very poor in accessory minerals, which are generally represented by Li-micas, Li-phosphates, Nb-Sn-Ta oxides, cookeite, carbonate and graphite. They are also poor in secondary (metasomatic) units due to their rather fluid-poor (anhydrous) nature. An example of a typical SRP body found in the Oeste Sector of the Baixa Grande Target is shown in Figure X. The SRP represented in drill core BGDD-23-025 is a typical unzoned pegmatite with spodumene crystals disseminated along almost the whole pegmatite body, excepting for the albite-rich borders and some sparce internal parts richer in coarse-grained K-feldspar (perthite) and quartz. Fine-grained spodumene occurs even in the thin and finer-grained (aplitic) domains that occasionally are found in the SRP bodies The SRP bodies in the Baixa Grande target are very poor in accessory and alteration minerals, such as muscovite, garnet (spessartine), Nb-Sn-Ta oxides and phosphates, generally containing less than 5 vol% in total of those minerals if the SRP is well preserved from weathering (Figure 8-1).

As a corollary of the poorly to non-diversified mineralogy, the scarcity of rare elements, except for lithium, imposes constraints on the geochemical prospecting methods to be applied on searching for spodumene-rich deposits. Conversely, the high Li content (1.4 wt% Li2O on average) in SRP-type magmas promotes a significant decrease in the crystallization temperature and viscosity of the silicate melt, leading to the high mobility that allows such a Li-rich magmas to crystallize as very large but relatively narrow SRP bodies, with hundreds to thousands of meters in length and width, but only decimeters to a few decameters in thickness.

Therefore, for prospection and exploration work related to spodumene-rich deposits, it is very important to distinguish between the non- to poorly zoned spodumene-rich pegmatites (SRP, i.e., pegmatites of the albite-spodumene type; Figure 8-1) and the complex zoned LCT pegmatites.

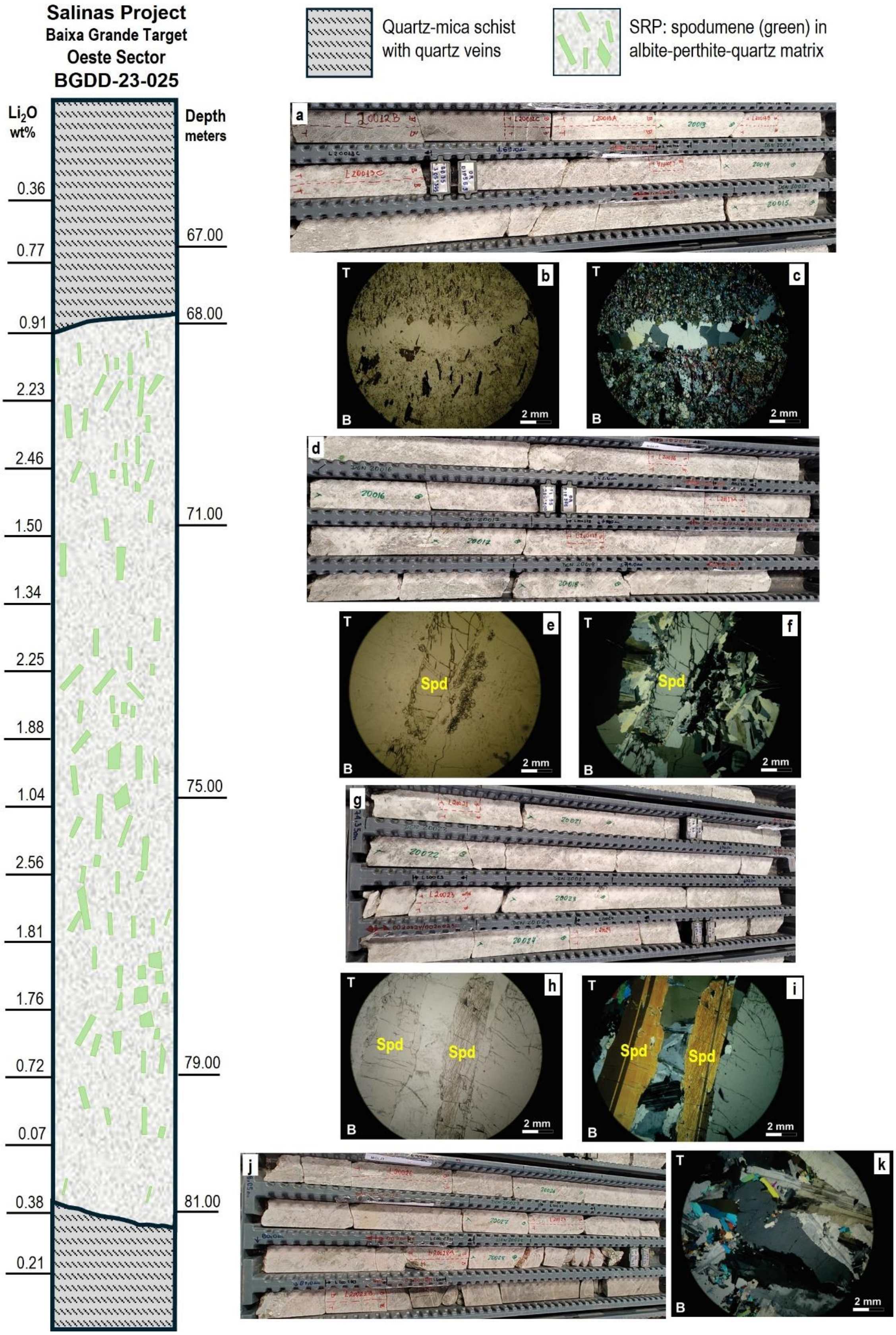

Salinas Project
Baixa Grande Target
Oeste Sector
BGDD-23-025
Quartz-mica schist with quartz veins
SRP: spodumene (green) in albite-perthite-quartz matrix
Li_2O wt%
Depth meters
0.36
0.77
0.91
2.23
2.46
1.50
1.34
2.25
1.88
1.04
2.56
1.81
1.76
0.72
0.07
0.38
0.21
67.00
68.00
71.00
75.00
79.00
81.00
a
b
c
d
e
f
g
h
i
j
k
T
B
Spd
2 mm

Figure 8-1: A typical intercept of a spodumene-rich pegmatite (SRP) in the Baixa Grande target (a, d, g, and j are photos from drill core segments; b, e, and h are photomicrographies under non-polarized light; c, f, i, and k are photomicrographies under polarized light). The column-section shows spodumene crystals (green) disseminated in the SRP matrix, as well as a rather regular distribution of Li2O content along the pegmatite, except for the spodumene-poor basal border rich in feldspars and quartz (a, d, g, j). The pegmatite contacts are sharp and discordant to the S1 schistosity of the host quartz-mica schist (a) that contains small quartz veins (b, c). Disseminated in a matrix composed of albite, K-feldspar, quartz, and scarce muscovite and garnet (e, f, h, i, k), the spodumene crystals (Spd in e, f, h, and i) are free to very poor in inclusions and/or alteration minerals. Macroscopic description (logging) and column drawing by Geologist Marianna Castro; thin section description by Geologist MSc Laura Wisniowski.

9 EXPLORATION

Fieldwork was conducted in the Baixa Grande target together with an exploration approach that encompassed chip rock sampling, soil sampling, a trench program, structural analysis and a drilling program (see chapter 10-DRILLING). These activities aim to achieve a more profound comprehension of the local geology and the identification of potential spodumene-rich pegmatites.

9.1 Chip Rock Sampling

The chip rock samples started to be collected during Neolit exploration campaign, much earlier than soil sampling campaign. The Baixa Grande target tenements, especially the south tenement, have a lot of pegmatite outcrops. Thus, the field mapping led to the recognition of pegmatite outcrops, fragments of pegmatite minerals dispersed on the surface and soils, and some old diggings and present-day artisanal mines for gemstones and columbite-tantalite ("garimpos" in Brazilian Portuguese).

Spodumene crystals were identified in pegmatites cropping out in the Cubo, Sobradinho, Oeste and Noé sectors. At the Ju sector, spodumene crystals were found in old diggings. The chip rock map (Figure 9-1) shows the location of each collected sample, with their respective lithium oxide content (Li2O %), and the location of the pegmatite exposures that are mineralized or barren in spodumene.

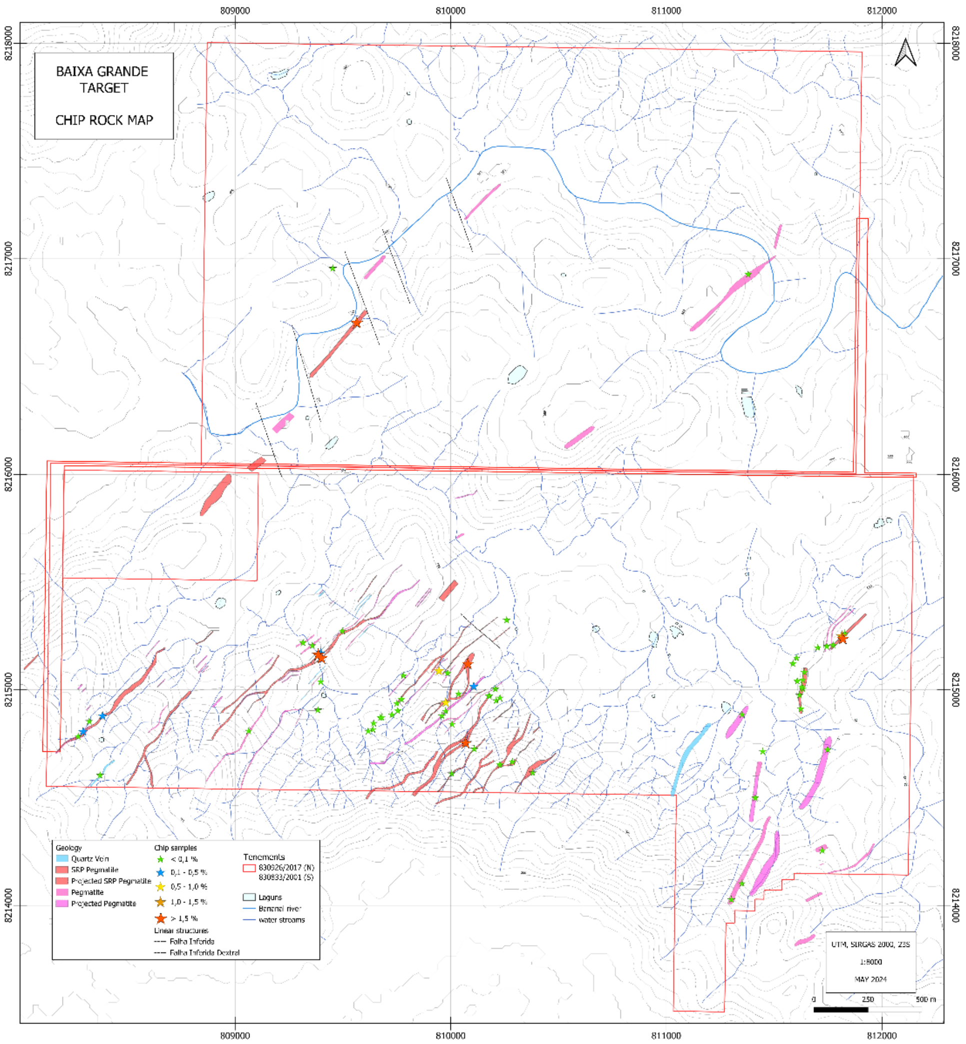


Figure 9-1: Chip rock map for the Baixa Grande Target, showing the distribution of the collected samples and the regions where the pegmatites are exposed and inferred on the surface.

9.2 Soil Sampling Program

The soil program in the Baixa Grande Target was conducted in two campaigns. The lines on both campaigns were oriented along the same azimuth N50W. The first survey had the lines spaced at regular intervals of 400 meters. Within each of these lines, samples were collected every 20 meters. The second survey was an infill campaign on Oeste, Sobradinho, Cubo and Noé sectors. The lines were spaced at regular intervals of 200 meters and the samples were collected also every 20 meters.

A total of 2,223 samples were collected in the Baixa Grande Target and the content of lithium varied on both tenements from 10 ppm to 1,009 ppm.

Calculations based on the distribution of the results indicated a subdivision of the content as low grade (< 100 Li ppm); low to moderate grade (100-180 Li ppm); moderate to high grade (180-350 ppm); and high grade (> 350 ppm).

Based on the distribution of the results, it was possible to interprete at least ten moderates to high grade anomalous zones that represent more favorable spots to prospect spodumene-rich pegmatites (Figure 9-2). These anomalous regions are strongly oriented along the NE-SW direction, which is the same strike of the regional foliation and the mapped pegmatites in the Baixa Grande target.

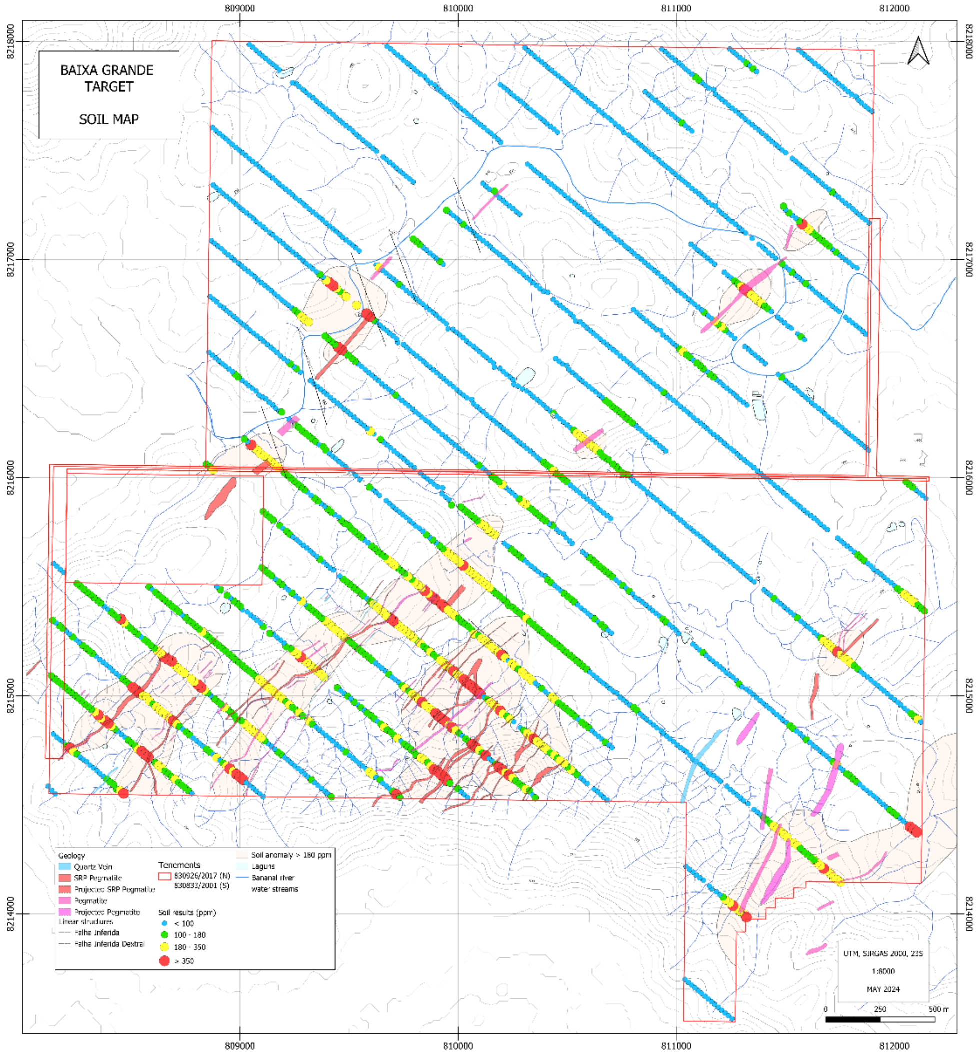


Figure 9-2: Soil geochemical map of the Baixa Grande Target. The remarkable NE-SW anomalous trend is rather parallel to the NE-SW strike of the spodumene-rich pegmatites.

9.3 Structural Analysis

Understanding the structural framework of the host rocks is crucial for prospecting pegmatites since structures of country rocks host and control the migration of the silicate magmatic residues released from granitic intrusions or formed by partial melting of country rocks. Consequently, the structural framework together with the rheology of host rocks determine the spatial distribution of both barren and spodumene-rich pegmatites, and also influence their shapes and sizes in the Baixa Grande Target. Regionally, the spodumene-rich pegmatites of the Araçuaí District, including the Baixa Grande Target and the whole Curralinho Pegmatite Field, are late igneous intrusions passively hosted the structural framework of the Salinas Formation. However, some very late brittle structures may locally cut spodumene-rich pegmatites. The rheology of the Salinas rocks determines the preferential host structure for pegmatites. Usually, pegmatites hosted in mica-rich schists are concordant to the S1 schistosity, such as in the Lithium Ionic's Bandeira deposit, while in quartz-rich rocks (metawackes or quartz-rich schists) the brittle structures (e.g., the S2 spaced cleavage and fractures) are the preferential host structures, such as in the Baixa Grande target (Figure 9-4, Figure 9-5 and Figure 9-6). The structural map of the Baixa Grande Target (Figure 9-3).

The ductile and brittle structures that may host pegmatites in the Baixa Grande Target were detailed mapped on the exposures of Salinas Formation rocks and pegmatites (Figure 9-4)

The prominent ductile structure is the regional foliation (S1), represented by a penetrative schistosity in Salinas mica-rich schists and a less penetrative ductile foliation in the quartz-rich rocks (metawackes and calcsilicate rocks). The regional foliation (S1) formed during the progressive tectono-metamorphic event related to the syn-collisional stage of the Araçuaí orogen. This dominant ductile structure, i.e., the regional schistosity (S1), exhibits a consistent orientation in both NE-trending strike and NW dip across the entire area. The regional foliation S1 contains the mineral and stretched lineation (L1) represented by aligned and elongated micas, and ellipsoidal cordierite porphyroblasts recrystalized along S1. The kinematic indicators related to both S1 and L1 regionally indicate tectonic transport from NE to SW, during the D1 deformation phase (Santos et al., 2009).

In contrast, the brittle structures, represented by the spaced fracture cleavage (S2) and other fracture systems, cut the ductile structures and have been interpreted as related to the gravitational collapse of the orogen during the post-collisional phase (D2 deformation event) and, locally, also to the emplacement of granite intrusions (DG deformation event). The most important brittle structure hosting spodumene-rich pegmatites in the Baixa Grande target is the NE-trending and SE-dipping, spaced fracture cleavage (S2; Figure 9.5 - B, C; and Figure 9.6). The S2 spaced cleavage is, generally, the more penetrative brittle structure in the entire area (Figure 9.5 - B, C). Other brittle structures are represented by fracture systems (or families), occasionally joints, that cut the S1 schistosity and other structures of the Salinas rocks (Figure 9-4, Figure 9-5 and Figure 9-6).

(Figure 9.5. and are part of a conjugate system denoted F1 and F2 (Figure 9-6). Each structure was denoted as either F1 (fractures with a moderate to subvertical dip) and F2 (sub-vertical fractures). This conjugate system presence may vary depending on the outcrop. The F1 structure seems more pervasive in the entire region than F2 (Figure 9-6- B).

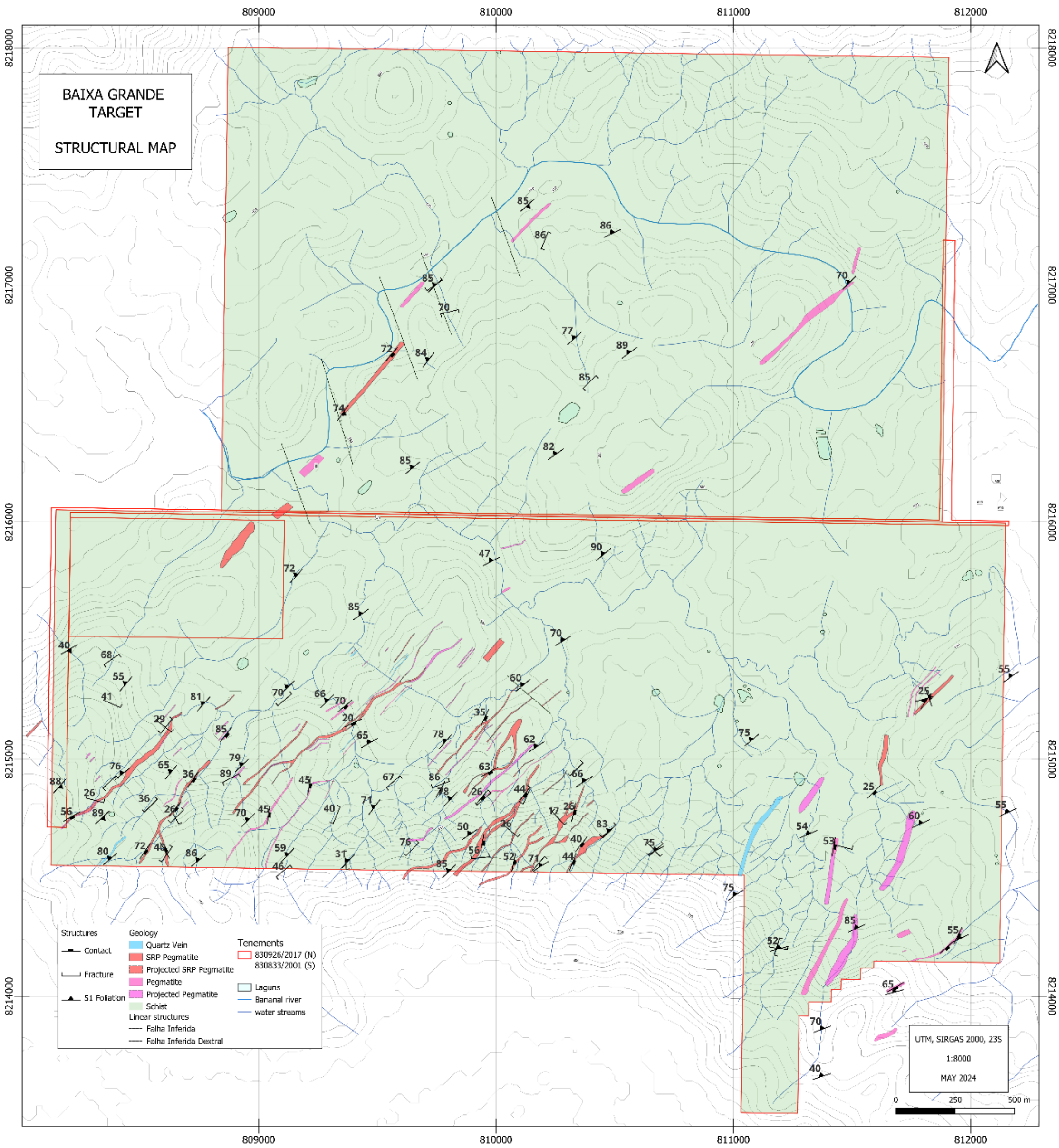


Figure 9-3: Structural map of the Baixa Grande Target emphasizing the distribution of the mapped structures.

There are pegmatite bodies that were projected based on the intercepts of drillholes and others were mapped on field work. The attitude of each contact is based on field work measures.

The brittle structures are represented by a series of fractures, occasionally joints, that intersect the S1 schistosity and are part of a conjugate system denoted F1 and F2 (Figure 9-5). Each structure was denoted as either F1 (fractures with a moderate to subvertical dip) and F2 (sub-vertical fractures). This conjugate system presence may vary depending on the outcrop. The F1 structure seems more pervasive in the entire region than F2 (Figure 9-5- B). There is also another fracture system related to the development of a cleavage fracture (secondary foliation S2), in which the SRP pegmatites are allocated (Figure 9-6). The S2 structure seems more pervasive in the entire region than all the other fractures (Figure 9-6- B, C).

Understanding the structural patterns in the host rocks is crucial for prospecting pegmatites since these structures serve as the surfaces that guide the migration of the silicate magmatic residues. Consequently, they profoundly influence the shape and continuity of the pegmatite bodies enriched in spodumene in the Baixa Grande Target.

Figure 9-4: A) quartz-biotite schist showing the regional schistosity (S1) cut by fractures in the Baixa Grande target (UTM: 809,325 / 8,214,796); B) scheme highlighting the structures in the same outcrop (a): regional ductile foliation (schistosity S1) and a fracture conjugated system (F1, with moderate to sub-vertical dip; and F2, subvertical).

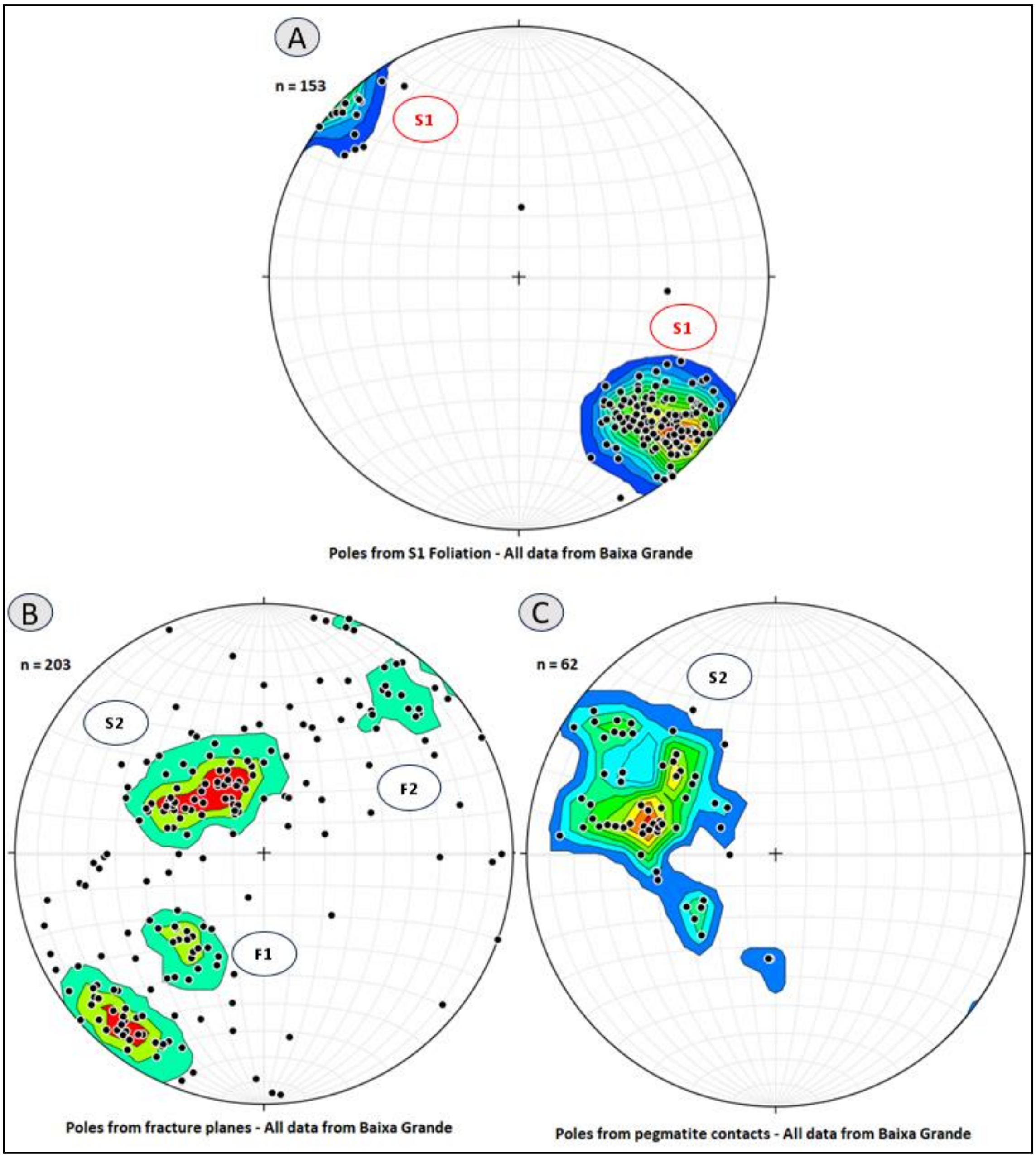


Figure 9-5: Stereograms that represent poles: A) schistosity (S1) planes in quartz-biotite schist in the Baixa Grande target; B) frature conjugate system (F1 and F2) and the S2 spaced fracture cleavage that hosts the spodumene-rich pegmatites in the Baixa Grande target ; C) contacts of spodumene-rich and barren pegmatites hosted by the S2 spaced fracture cleavage mostly dipping to SE.

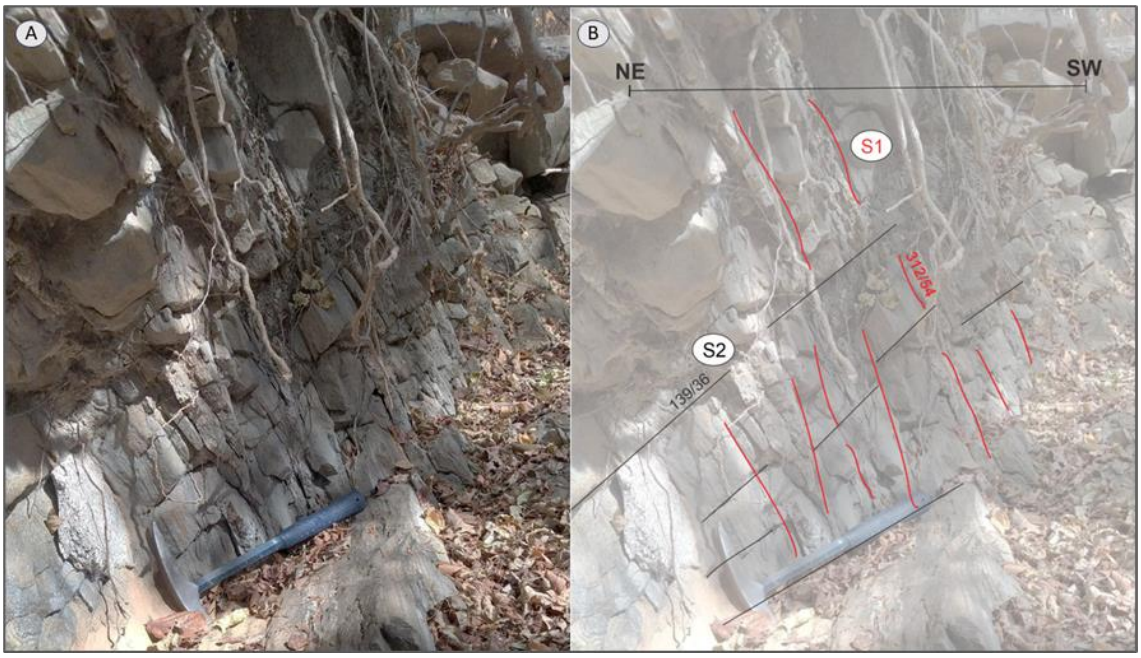


Figure 9-6: A) quartz-biotite schist cut by distinct fractures in the Baixa Grande target (UTM: 809,241 / 8,214,767); B) scheme highlighting the cross-cutting structures in the same outcrop (a): regional spaced fracture cleavage (S2 surfaces that hosts the spodumene-rich pegmatites in the Baixa Grande target) and the quartz-biotite schist schistosity (S1).

10 DRILLING

10.1 Lithium Ionic Drilling Campaigns

Lithium Ionic successfully executed 295 diamond drill holes within the Baixa Grande Property, as detailed in Table 10-1, Table 10-2 and Figure 10-1.

All diamond drilling activities conducted within the Baixa Grande Property until February 2024 have been incorporated into the Mineral Resource estimation process. It is important to note that any drill holes completed in 2024 after this date, as well as pending sample assay results, have not been considered in the present resource statement.

Table 10-1: Baixa Grande Drill Holes Summary.

Campaigns	Drill hole count	Total Drilled (m)
2022	25	4 037.1
2023	97	22 993.35
Total	122	27 030.45

10.2 Drill Type

In general terms, drilling operations were conducted using core techniques with NQ core size specifications, featuring a 47.6 mm core diameter, with exception of initial drilling runs crossing weathering zone, which was drilled in HQ diameter (77.8mm). The diameter was chosen to ensure the retrieval core sample is representative and adequate to mineralization type and deposit characteristics. The relation of core diameter and sample length is essential for accurate geological logging, adequate sample support, and to secure a material supply for future metallurgical testing purposes.

10.3 Lithium Ionic Drilling Campaigns

Three Brazilian-based companies undertook the 2023-2024 Drill Program in Baixa Grande:

- Energold Drilling TM (https://energold.com/);
- GEOSOL Ltda (https://www.geosol.com.br).

10.4 Drill Hole Landmarks

All drill hole collars were surveyed by a Differential GPS and the landmarks were placed by the driller once the hole had been completed.

10.5 Drillhole Surveying

The drill holes were drilled with a plunge between 40º to 80º. Boreholes are oriented at approximated azimuths 320° and 145°, perpendicular to both general orientations of the pegmatite intrusions.

Lithium Ionic used the REFLEX GYRO IQ downhole survey tool to obtain all downhole survey data.

According to The REFLEX GYRO-IQ™ website, the tool can maintain high accuracy of surveys. The device is connected to a cloud-based data hub, with a secure chain of custody and QA/QC application with real-time access to drilling survey data. Data transfer from field to office ensures minimum clerical errors related to processing and interpretation.

Lithium Ionic rented the downhole Reflex tool and completed all hole surveys at various locations and attitudes, where all necessary survey were done in real-time. Lithium Ionic staff had quick access to results through the cloud-based data hub. The design of the high-speed survey allowed Lithium Ionic field staff (including geologists and drillers) to obtain the following:

- Survey speeds of more than 150 meters surveyed per minute,
- There were no significant issues with the accuracy of results, which was confirmed once holes were plotted on a 3D modelling software.
- Continuous survey data comes from the tool's north-seeking sensors assisted with GPS.

The report's authors have no way to verify the accuracy of the survey method; hence, the authors will rely on the statements and information provided by Lithium Ionic.

10.6 Core Orientation

Lithium Ionic began implementing REFLEX ACT III to establish core orientation for drill holes within the Baixa Grande project after July 2023. As of the effective date, core orientation has been determined for four drill holes. Lithium Ionic has consistently integrated core orientation into its drilling program and will now prioritize its application in strategically significant sections of the geological model moving forward."

The Reflex core orientation system is based on recovering the core barrel orientation after a run. The Reflex orientation tool begins the orientation process by inserting the device in the core barrel using a specially made shoe. The tool records core barrel orientation each minute during a core run. The Reflex sleeve that attaches to the upper drill rod measures the direction of the top-of-hole using built-in accelerometers. Upon completion of a run, the drill string is left undisturbed while the communication tool, which is on the surface, counts down the time to the next reading; after this, the barrel can be withdrawn. On the surface, the tool is inserted into the end of the barrel, and the barrel is rotated until it indicates that the barrel is in the same up-down position as it was in the hole. The core, barrel, and shoe are then marked using a level to confirm verticality upward position. After the line is split, the top of the core marks is transferred along the length of the recovered core.

The report's authors have no way to verify the accuracy of the orientation method; the authors will rely on the statements and information provided by Lithium Ionic.

10.7 Drill Core Chain of Custody

The drill cores are primarily stored in plastic or wooden boxes.

It is always transported by the drilling companies from the drilling site directly to the Lithium Ionic core sheds in Araçuaí. Lithium Ionics's staff receives all core boxes delivered.

10.8 Core Logging Procedures

Lithium Ionic adheres to a core logging methodology, carried out by geologists and technicians.

In summary, the following procedures are conducted:

- Preparation of drilling site.
- Collar Drilling location.
- Verify and validate meterage and quality of drill cores in the field.
- Core survey drilling.
- Photographs of the core box.
- Detailed petrographic and geological structural core logging.
- Geotechnical logging (RQD, weathering types).
- Sample geochemistry logging programming and QAQC procedures.
- Drill core density determinations for each programmed sample.
- Core sample preparation for geochemistry analysis.
- Logistics protocols for sending samples to the laboratory.

Each procedure has its respective sheet and is stored in digital form within Lithium Ionic customized database system.

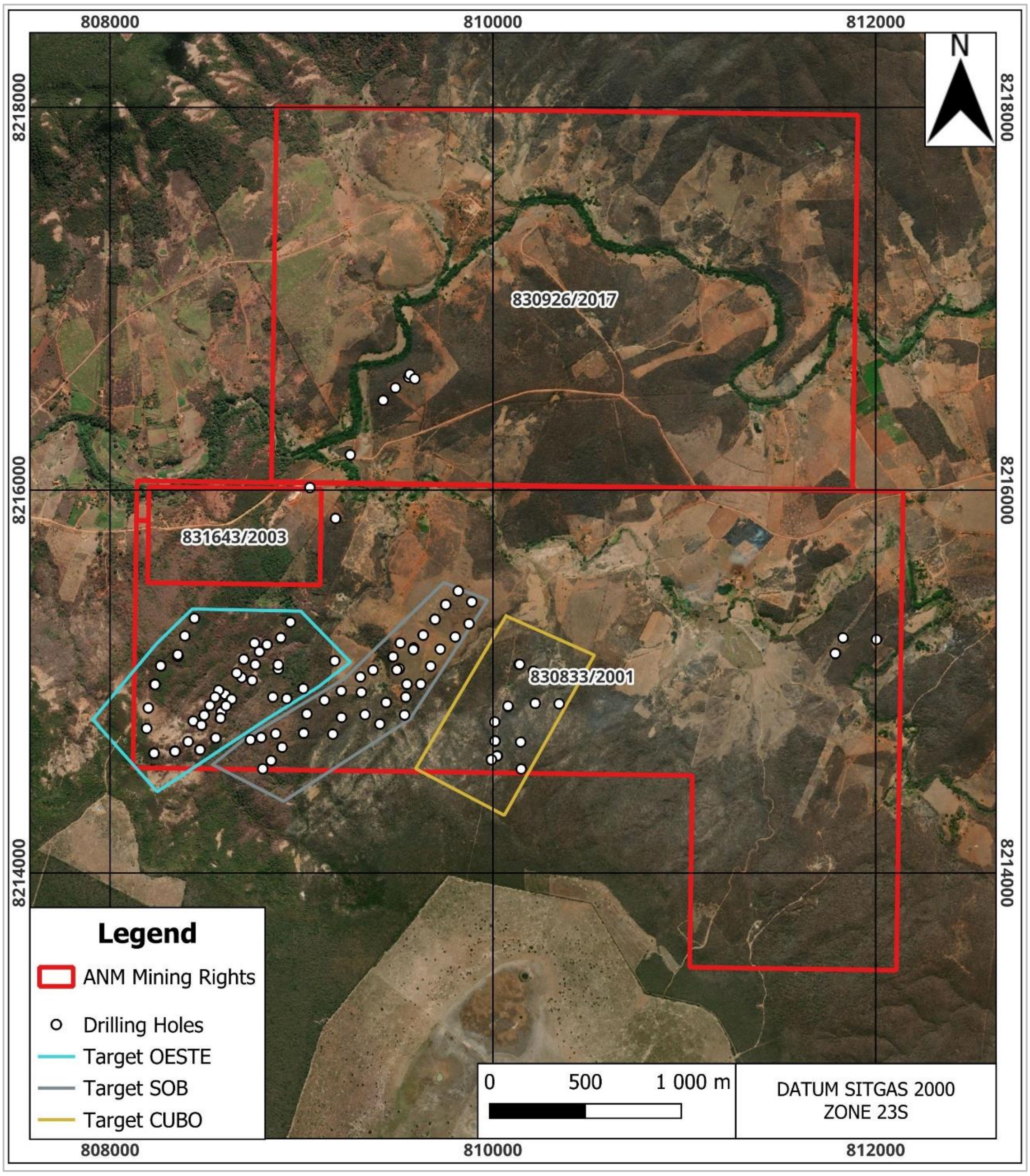


Figure 10-1: Lithium Ionic Drill Holes and Trenches

Table 10-2: Baixa Grande Drill Holes.

HOLE-ID	X	Y	Z	DEPTH	HOLE-ID	X	Y	Z	DEPTH
BGDD-23-025	808687	8215022	645	106.3	BGDD-23-066	809443	8214891	607	166.6
BGDD-23-026	808580	8214842	685	180.85	BGDD-23-067	809332	8214828	618	206.6
BGDD-23-027	808687	8215022	645	161.7	BGDD-23-068	808391	8215239	691	290.85
BGDD-23-028	808581	8214842	686	229.7	BGDD-23-069	809409	8214779	627	303.4
BGDD-23-029	808602	8214933	685	138.4	BGDD-23-070	808230	8214626	768	203.5
BGDD-23-030	808635	8214909	680	166.25	BGDD-23-071	808266	8215083	734	260.2

BGDD-23-031	808743	8215007	636	230.75
BGDD-23-032	808521	8214875	694	117.05
BGDD-23-033	808635	8214909	680	270.1
BGDD-23-034	808699	8215117	632	123.15
BGDD-23-035	808435	8214794	728	379.75
BGDD-23-036	808755	8215201	615	146.1
BGDD-23-037	808551	8214705	721	368.7
BGDD-23-038	808780	8215156	616	186.35
BGDD-23-039	808408	8214686	740	250.7
BGDD-23-040	808340	8214636	750	244.85
BGDD-23-041	808892	8215229	606	166.3
BGDD-23-042	808469	8214645	735	310.15
BGDD-23-043	808942	8215311	607	162.7
BGDD-23-044	809174	8215109	624	424.6
BGDD-23-045	809511	8215067	619	144.2
BGDD-23-046	808340	8214636	750	310.05
BGDD-23-047	808470	8214644	735	436.05
BGDD-23-048	809586	8215176	642	232.5
BGDD-23-049	809624	8214987	605	291.45
BGDD-23-050	808337	8214636	750	336.8
BGDD-23-051	809635	8215244	631	252.2
BGDD-23-052	809675	8215080	608	175
BGDD-23-053	809636	8215243	631	190
BGDD-23-054	808552	8214706	721	418.9
BGDD-23-055	808339	8214637	750	249.5
BGDD-23-056	809725	8215169	608	205.2
BGDD-23-057	809697	8215326	628	170.25
BGDD-23-058	809803	8215234	601	227.55
BGDD-23-059	809698	8215325	628	160.8
BGDD-23-060	809875	8215302	597	201.25
BGDD-23-061	808339	8214635	750	250.6
BGDD-23-062	809753	8215403	636	182.9
BGDD-23-063	808234	8214984	747	480.1
SLCU-D001	810137	8215091	591	123.4
SLCU-D001B	810140	8215090	600	35.9
SLCU-D002	810212	8215055	591	170
SLCU-D003	810221	8214887	601	280.55
SLCU-D011	810010	8214790	647	280.6

BGDD-23-072	808441	8215331	667	379.95
BGDD-23-073	809539	8214826	628	252.9
BGDD-23-074	808230	8214626	768	257.75
BGDD-23-075	808266	8215084	734	250
BGDD-23-076	809313	8214944	600	202.7
BGDD-23-077	808200	8214863	763	410.95
BGDD-23-078	808791	8214709	726	356.15
BGDD-23-079	809374	8215061	595	151.05
BGDD-23-080	808265	8215083	734	250
BGDD-23-081	809516	8215202	638	180.2
BGDD-23-082	808191	8214755	767	380.4
BGDD-23-083	809479	8215130	623	130.5
BGDD-23-084	809208	8214951	618	160.25
BGDD-23-085	809308	8215024	607	151.7
BGDD-23-086	808790	8214708	726	150.75
BGDD-23-087	809120	8214903	635	150.95
BGDD-23-088	808923	8214912	645	323.05
BGDD-23-089	808865	8214728	725	411.6
BGDD-23-090	809890	8215417	617	200.45
BGDD-23-091	808235	8214987	747	220.2
BGDD-23-092	808606	8214874	682	110.6
BGDD-23-093	808232	8214987	747	260
BGDD-23-094	808923	8214911	645	443.7
BGDD-23-095	808549	8214919	687	73.55
BGDD-23-096	809028	8214831	665	432
BGDD-23-097	808491	8214825	711	100.4
BGDD-23-098	808235	8214985	747	300.1
BGDD-23-099	808492	8214824	711	399.2
BGDD-23-100	809011	8214732	691	198.9
BGDD-23-101	808878	8215088	611	210.55
BGDD-23-102	810023	8214612	695	264.4
BGDD-23-103	809012	8214731	691	250.45
BGDD-23-104	808355	8215133	720	280.45
BGDD-23-105	809164	8214726	647	220.25
BGDD-23-106	808898	8214657	734	220.45
BGDD-23-107	809992	8214593	702	129.95
BGDD-23-108	808354	8215134	720	240
BGDD-23-109	810022	8214612	695	170.5

SLJU-D007	811789	8215147	623	76.95
SLJU-D008	811789	8215147	623	115.85
SLJU-D009	812004	8215220	609	136.85
SLJU-D010	811830	8215229	621	78.15
SLOE-D012	808477	8214773	719	153.1
SLOE-D013	808576	8214810	696	172.7
SLOE-D014	808662	8215045	643	90.4
SLOE-D015	808567	8214956	675	96.2
SLOE-D016	808820	8215193	606	127.6
SLOE-D018	808851	8214920	650	262.8
SLOE-D019	808733	8214696	708	300
SLOE-D020	808577	8214809	696	298.85
SLOE-D021	808878	8215066	614	193.8
SLOE-D022	808759	8215089	619	130.4
SLSB-D004	809498	8215062	615	85.8
SLSB-D005	809551	8214987	607	223.8
SLSB-D006	809585	8215168	642	93.45
SLZO-D017	809178	8215853	567	210.4
SLZO-D023	809255	8216185	554	75.2
SLZO-D024	809561	8216590	599	224.35
BGDD-23-064	809545	8214919	620	253.6
BGDD-23-065	809754	8215402	636	204.75
BGDD-23-110	808899	8214657	734	253.95
BGDD-23-111	809209	8214813	629	220.5
BGDD-23-112	808354	8215141	710	282.2
BGDD-23-113	809992	8214592	702	162.45
BGDD-23-114	808841	8214588	752	251
BGDD-23-115	810012	8214690	673	81.75
BGDD-23-116	809009	8214964	636	341.15
BGDD-23-117	810148	8214543	719	300.5
BGDD-23-118	810011	8214690	673	161.1
BGDD-23-119	810079	8214870	626	180.3
BGDD-23-120	808842	8214588	752	313.3
BGDD-23-121	809010	8214964	636	371.2
BGDD-23-122	810079	8214872	626	280.35
BGDD-23-123	808798	8214544	758	290.3
BGDD-23-124	810145	8214684	685	330.1
BGDD-23-125	810346	8214884	606	350.4
BGDD-23-126	809566	8216606	597	150.65
BGDD-23-127	809491	8216535	596	160.15
BGDD-23-128	809819	8215473	633	175.8
BGDD-24-129	809592	8216582	590	248.95
BGDD-24-130	809427	8216470	579	140.9
BGDD-24-131	809044	8216014	566	124.1

10.9 Drilling Intercepts Results

Drill spacing typically ranges from 50m to 150m, with narrower spacing observed in the central portion of the drill pattern and wider spacing towards the pattern's edges. The mineralization intercepts vary in thickness, ranging from approximately 85% of the true width to nearly the true width of the mineralization.

The average pegmatite intersection spans from 0.3m to 53m, with an average true thickness of about 5m. In total, 257 mineralized intercepts from diamond drill holes (DDH) were utilized for modelling the 15 mineralized solids within the Baixa Grande target. Each solid was assigned a numerical code in the tag column.

Table 10-3 presents a list the mineralized intervals from Baixa Grande drill holes that were incorporated into the 3D modeling of the mineralized solids (Figure 10-2 and Figure 10-3).

Table 10-3: Drill holes mineralized intervals intercepted by the grade shell model.

hole Id	From	To	Length	Li2O	Target	hole Id	From	To	Length	Li2O	Target

BGDD-23-119	68.25	69.33	1.08	0.48	CUBO01
BGDD-23-122	90.59	97.59	7.00	1.00	
BGDD-23-124	161.31	165.1	3.79	1.46	
SLCU-D002	56.11	60.19	4.08	1.26	
SLCU-D003	99.86	100.78	0.92	0.35	
SLCU-D011	66.58	67.57	0.99	0.45	
BGDD-23-109	8	10	2.00	1.48	CUBO02
BGDD-23-113	17.5	18.5	1.00	1.45	
BGDD-23-117	140.53	141.53	1.00	1.15	
BGDD-23-119	72.85	74.61	1.76	1.69	CUBO03
BGDD-23-122	99.59	105.77	6.18	1.45	
BGDD-23-124	200.19	201.72	1.53	0.96	
BGDD-23-125	198.14	202.14	4.00	1.04	
SLCU-D001	62.44	62.96	0.52	0.70	
SLCU-D002	87.35	87.96	0.61	1.02	
SLCU-D003	118.05	122.75	4.70	0.37	
SLCU-D011	79.82	80.78	0.96	0.46	
BGDD-23-119	157.49	159.49	2.00	0.99	CUBO04
BGDD-23-125	259.95	277.12	17.17	0.54	
SLCU-D001	103.66	108.33	4.67	0.67	
SLCU-D002	152.4	154.4	2.00	1.49	
SLCU-D003	199.91	202.96	3.05	0.69	
SLCU-D011	161.76	162.7	0.94	1.22	
BGDD-23-102	65.94	89.24	23.30	0.81	CUBO05
BGDD-23-107	76.08	87.99	11.91	1.51	
BGDD-23-109	108.26	144.46	36.20	0.96	
BGDD-23-113	106.51	124.24	17.73	0.84	
BGDD-23-115	26.815	44.95	18.14	0.77	
BGDD-23-117	194.3	205.3	11.00	0.98	
BGDD-23-118	26.02	79.22	53.20	0.85	
BGDD-23-124	114	123.6	9.60	0.78	
BGDD-23-122	208.08	209.08	1.00	0.78	CUBO06
BGDD-23-125	255.45	257.82	2.37	1.47	
SLCU-D002	133.78	134.45	0.67	1.19	
SLCU-D003	191.39	192.83	1.44	0.77	
BGDD-23-025	68.2	80.2	12.00	1.60	OES TE01
BGDD-23-026	124.65	125.65	1.00	0.36	

BGDD-23-055	81.5	82.21	0.71	1.50	OESTE01
BGDD-23-061	95.57	95.95	0.38	0.34	
BGDD-23-088	282.85	284.85	2.00	0.36	
BGDD-23-092	84.89	94.89	10.00	1.34	
BGDD-23-095	42.16	57.16	15.00	1.59	
BGDD-23-097	63.12	75	11.88	1.60	
BGDD-23-099	109.22	114.22	5.00	0.93	
BGDD-23-116	323.5	325.5	2.00	0.45	
SLOE-D012	88.6	91.29	2.69	1.04	
SLOE-D013	97.7	108.52	10.82	1.59	
SLOE-D014	43.84	55.2	11.36	1.53	
SLOE-D015	36.6	50.36	13.76	1.22	
SLOE-D018	235.8	253	17.20	1.01	
SLOE-D021	182.74	184.53	1.79	0.68	
SLOE-D022	102.68	110.12	7.44	1.09	
BGDD-23-037	293.4	298.4	5.00	0.41	OESTE02
BGDD-23-039	179.4	186.37	6.97	1.05	
BGDD-23-040	179.42	184.28	4.86	1.01	
BGDD-23-042	236.65	245.45	8.80	0.62	
BGDD-23-046	222.05	239.1	17.05	0.92	
BGDD-23-047	370.7	377.7	7.00	1.30	
BGDD-23-050	243.48	251.48	8.00	0.42	
BGDD-23-055	156.38	158.21	1.83	1.07	
BGDD-23-061	166.62	171.62	5.00	0.88	
BGDD-23-074	141.44	150.44	9.00	1.03	
BGDD-23-063	230.3	233.3	3.00	0.72	OESTE03
BGDD-23-071	212.75	222.75	10.00	1.01	
BGDD-23-091	182.7	185.7	3.00	0.78	
BGDD-23-098	199.7	208.7	9.00	1.58	
BGDD-23-104	219.45	222.45	3.00	0.31	
BGDD-23-112	244.35	253.35	9.00	1.05	
BGDD-23-088	231.46	241.46	10.00	1.25	OESTE0 4
BGDD-23-094	279.34	282.39	3.05	1.41	
BGDD-23-116	235	245	10.00	1.31	
BGDD-23-039	157	158.09	1.09	0.46	OESTE0 5
BGDD-23-097	84.17	88.17	4.00	0.69	
SLOE-D012	119.82	122.15	2.33	0.84	

BGDD-23-027	113.89	137.93	24.04	0.85		BGDD-23-045	80.3	82.5	2.20	0.82	
BGDD-23-029	61.94	76.94	15.00	1.09		BGDD-23-048	76.5	78.77	2.27	1.55	
BGDD-23-030	94.16	104.16	10.00	1.34		BGDD-23-051	39.05	42.05	3.00	0.66	
BGDD-23-031	162.02	165.02	3.00	0.74		BGDD-23-053	34.39	37.39	3.00	1.55	SOB01
BGDD-23-032	40.38	56.38	16.00	1.38		BGDD-23-056	59.29	60.25	0.96	1.04	
BGDD-23-034	53.93	58.22	4.29	1.43		BGDD-23-059	6.35	7.35	1.00	0.50	
BGDD-23-035	66.89	68.89	2.00	0.80		BGDD-23-065	7.76	8.9	1.14	0.58	
BGDD-23-040	87.1	89.1	2.00	1.04		BGDD-23-067	136.35	138.14	1.79	1.04	

Table 10-3 (Continuation): Drill holes mineralized intervals intercepted by the grade shell model.

hole Id	From	To	Length	Li2O	Target
BGDD-23-076	79.33	82.33	3	1.68	
BGDD-23-079	23.53	25.35	1.82	0.77	
BGDD-23-081	46.18	48.18	2	0.6	
BGDD-23-083	43.85	44.85	1	0.71	
BGDD-23-084	34.93	37.93	3	1.26	
BGDD-23-085	22.98	26.15	3.17	0.51	
BGDD-23-087	67.66	68.66	1	0.49	SOB01
BGDD-23-090	9.45	10.2	0.75	0.3	
BGDD-23-096	90.7	93.4	2.7	0.34	
BGDD-23-100	120.18	129.25	9.07	1.13	
BGDD-23-103	194	198.9	4.9	1.18	
BGDD-23-105	167.43	168.43	1	0.46	
BGDD-23-106	174.54	177.54	3	1.49	
BGDD-23-110	178.25	189.25	11	1.42	
BGDD-23-111	132.14	135.14	3	0.55	
BGDD-23-114	209.62	214.62	5	1.15	
BGDD-23-120	274.3	292.22	17.92	0.63	
BGDD-23-123	250.45	251.45	1	0.64	
SLSB-D004	66.66	70.92	4.26	1.32	SOB01
SLSB-D006	70.5	74.35	3.85	1.55	

hole Id	From	To	Length	Li2O	Target
BGDD-23-048	82.14	83.14	1	0.31	
BGDD-23-079	29.67	37.45	7.78	1.56	
BGDD-23-081	49.18	51.18	2	1.19	
BGDD-23-083	61.62	67.35	5.73	1.27	SOB02
BGDD-23-084	80.7	82.3	1.6	0.68	
BGDD-23-085	58.65	63.65	5	1.39	
SLSB-D004	74.88	78.33	3.45	0.94	
SLSB-D006	81.35	83.42	2.07	0.69	
BGDD-23-057	95.2	96.2	1	0.75	
BGDD-23-062	68.65	69.53	0.88	0.4	SOB03
BGDD-23-065	77.02	78.02	1	0.55	
BGDD-23-087	31.35	32.35	1	0.86	
BGDD-23-096	66.7	70.64	3.94	1.66	SOB04
BGDD-23-103	170.63	172.34	1.71	1.34	
BGDD-23-105	154.47	158.6	4.13	0.81	

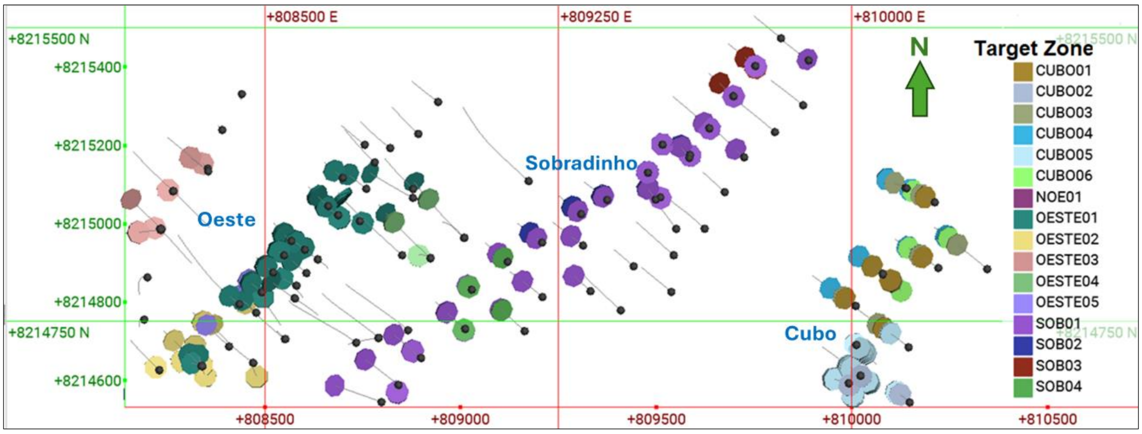


Figure 10-2: Horizontal Projection of Baixa Grande Drilling Holes with Mineralized Intercepts.

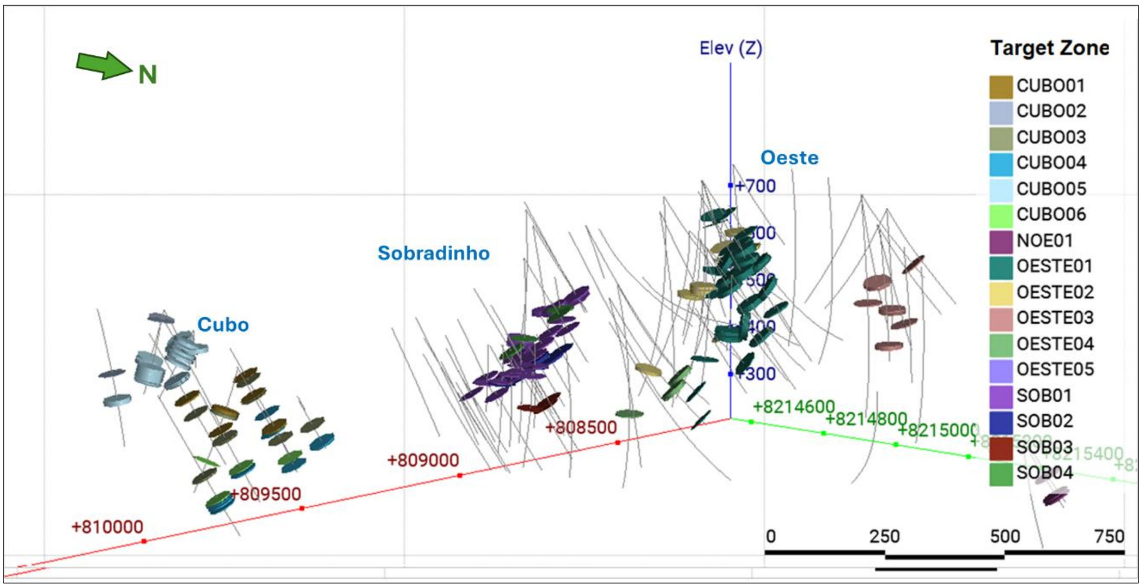


Figure 10-3: Oblique View of Drill Holes with Mineralized Intercepts.

10.10 QP's Comments

Procedures applied by Lithium Ionic in current drilling campaigns are considered by QP as compliant with best practices of mineral industry. The use of historical drilling information from previous drilling campaigns, with no use of grade results is considered appropriated for geological modeling.

Drilling intercepts in spodumene pegmatites show drilling grid spacing and continuity of mineralized structures and grades that satisfies the basic requirements for mineral resources estimate purposes.

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Sampling

Samples are prepared from NQ diameter drill cores (47.6mm core diameter) in general terms. Only the shallow drilling runs crossing weathering zone were drilled on HQ drilling diameters. Few samples were generated on HQ diameter. The sampling procedures described in this section reflect the current Standard Operational Procedures (SOP) in use by Lithium Ionic.

Sample intervals in the mineralized zones are defined based on a 1.00m support. Mineralized samples must have a minimum length of 1.00m and a maximum length of 1.50m. In some specific situations, samples shorter than 1.00m can be generated. These situations are described in detail in the SOP.

Outside the mineralized domains, the sampling support is 1.50m, and samples can range from 1.00m to 3.00m.

The visual indicators for sample interval definition include lithological contacts, structures, and mineralization.

The sample collection and sample definition procedures adopted by Lithium Ionic are described below:

- Drill core is brought in by the drilling contractor team, one or more times per shift, from the drill rig to a drill logging and sampling area.
- The disposition and orientation of boxes are checked, and the depth lengths are marked.
- Core boxes are photographed (three boxes per picture) and logged.
- Sample intervals are marked with a pencil in the core box.
- Before sampling, the drill core is marked by a line drawn along the core at high angles to the foliation to orient the saw cut. The right side of the core is selected as a sample. The other half of the core is retained for future reference.
- Sample tags are attached to the core box at the end of each sample.
- Sample bags are numbered before sampling.
- Sample tags are inserted in the bags only after samples are bagged.
- After the samples are tagged and bagged, they are weighted.
- The core is cut lengthwise along the core axis. A Geologist defines the position of the cut, and a Geology Technician performs the cutting.
- For weathered material, a spatula or a machete is used to split the sample into two subsamples along the drilling direction.
- Fresh rock cores are cut in half using a diamond saw and flushed with water between cuts.
- After bagging, the samples are weighted, and the weight is registered.
- Batches are assembled and sent to the laboratory.

The standard batch size is 35 samples, consisting of 29 core samples and 6 quality control samples.

11.2 Sample Preparation, Security and Custody Chain of Custody

Samples are defined and marked on-site after logging and entering the data into the database. Cores are split in half using a diamond saw. Half of the core is left in the core box, while the other half is stored in plastic bags, accompanied by a printed sample tag, and sent to the lab.

Drill core samples are prepared and analyzed by an independent commercial laboratory (SGS Geosol). The SGS Geosol facility is ISO 9001, ISO 14001, and ISO 17025 certified. The sample shipment is delivered to the SGS Geosol facility in Vespasiano, Minas Gerais, Brazil, via a parcel transport company. At all times, samples are in the custody and control of the Company's representatives until delivery to the laboratory, where samples are held in a secure enclosure until processing. SGS Geosol sends a confirmation e-mail with details of samples received upon delivery. The chain of custody of the batches was carefully maintained from collection at the drill rig to delivery at the laboratory to prevent accidental contamination or mixing of samples and render active tampering as tricky as possible.

All samples received at SGS Geosol are inventoried and weighted before processing. Samples are dried at 105°C, crushed to 75% passing a 3 mm sieve, homogenized, split (jones riffle splitter), and pulverized (250 to 300 g of sample) in a steel mill to 95% passing 150 mesh.

11.3 Density Measurements

The density SOP currently in use by Lithium Ionic states that density measurements should be taken for every geochemical sample generated. In the cases where the drill core quality does not allow for the density assay, this should be registered in the density sampling plan with a specified tag. The high frequency of the density sampling aims for the acquisition of a statistically robust database.

For the geochemical samples with more heterogeneity 3 samples should be taken, one on the top of the sample, other in the middle and other in the base. Homogenous geochemical samples should generate only one density sample. Density samples must have a minimum length of 10 cm and a maximum of 25 cm. Density is commonly measured in the unsampled half-cores, reflecting on a faster and more dynamic drillhole data collection process. All density data is stored in a database. A summary of the procedures described in the density SOP is presented next:

- Sample selection and registration in the density plan.
- Weighing of the sample.
- Weighing of the sample while submerged.
- Density values are acquired from the following formula:

$D = P_A / (P_A – P_B)$

D = Density.

P_A = Sample weight (in the air).

P_B = Sample weight (submerged in water).

The density assay procedures do not include drying or sample sealing with paraffin. Considering the climate and the lithological characteristics of the deposit, not implementing the mentioned procedures might be acceptable.

For a more conclusive evaluation of the effect of those procedures on the density results, GE21 recommends duplicate density assays, using the SOP procedure in one sample and a procedure that includes drying and sealing in the other sample. For the sealed samples, the density formula to be used is:

Ds = Ps / [(Pp – Pj) – (Pp – Ps) * dp]

Ds = Dry Density.

Ps =Dry sample weight (in the air).

Pp = Sealed sample weight (in the air).

Pj = Sealed sample weight (submerged in water).

Dp = Paraffin density.

11.4 Sample Analysis

After the preparation, the core samples are analyzed by SGS Geosol. The chemical assays are performed using SGS's analytical method ICP90A, a multi-element analysis using fusion by sodium peroxide (Na_2O_2) and finish with ICP-OES analysis. If lithium results are above 15000 ppm, SGS Geosol re-analyzes for lithium through the ICP90Q_Li method, which is similar to the ICP90A but with higher Detection Limits.

All the chemical analyses conducted by SGS Geosol are reported to Lithium Ionic on PDF format certificates, which are also accompanied by an MS Excel digital file.

11.5 Quality Assurance and Quality Control (QAQC)

The Quality Assurance and Quality Control program implemented was proposed by the independent company GE21. The sample batch composition includes 5 Quality Control Samples for every 30 regular samples. The Quality Control composition of the batches is described next:

- Coarse (Preparation) and Fine (Analytical) Blanks: 6% of the batch, or two blanks per batch, one of each type.
- Standards: 6% of the batch, or two standards per batch.
- Crushed Duplicates: 3% of the batch, or 1 sample per batch.
- Pulverized Duplicates: 3% of the batch, or 1 sample per batch.

Figure 11-1 present the batch composition scheme for batches with mineralized samples or zones and for unmineralized batches. Table 11-1 presents the proportion of Quality Control samples in the Lithium Ionic geochemical database.

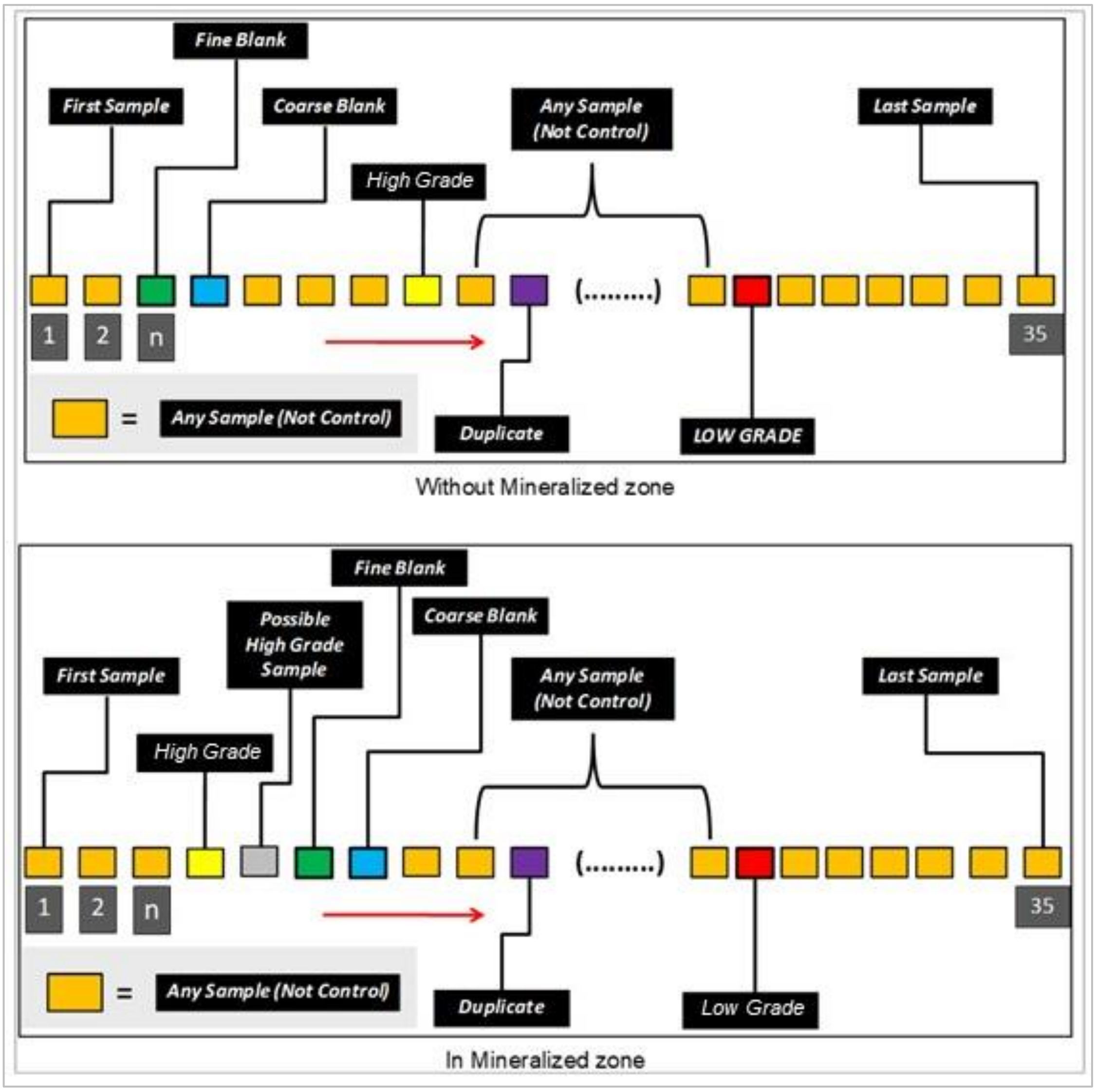


Figure 11-1: QAQC Program.

Table 11-1: QAQC Program Summary.

CRM	Crushed Duplicates	Pulverized Duplicates	Preparation Blanks	Analytical Blanks	Total QAQC Samples	Total Database
143	70	69	72	72	426	3 702
3.90%	1.90%	1.90%	1.90%	1.90%	11.50%	100.00%

11.5.1 Preparation Blank – Coarse Blank

Preparation blank samples are inserted in the sample batch before the physical preparation of the samples. This measure helps to track any contamination problems that might occur in the granulometric reduction processes or the sample-splitting processes. Blank samples are inserted in the beginning of the possibly mineralized intervals, following the sequence:

- Mineralized sample.
- Analytical/Fine Blank.
- Preparation/Coarse Blank.
- If an unmineralized batch is assembled, blank samples must be inserted at the beginning of the batch.

Lithium Ionic uses a commercial blank, ITAK-QG-01, as its Coarse Blank material. More than 95% of the Coarse Blank samples are below the 2x Detection Limit threshold, indicating no major contamination problems. Figure 11-2 presents the Preparation Blank control chart for Lithium.

Type of control	Blank
Reference	ITAK QG-01
Variable	Li ppm
Number of analysis	72

Blank code	**QG-01**
Limit of Detection (LOD)	**10.0**
Upper limit (2 x LOD)	**20.0**
Reference Valeu (REF)	5.0
Standard deviation	11.989

Minimum	10.0
Maximum	108.0
Average	13.4
Median	10.0

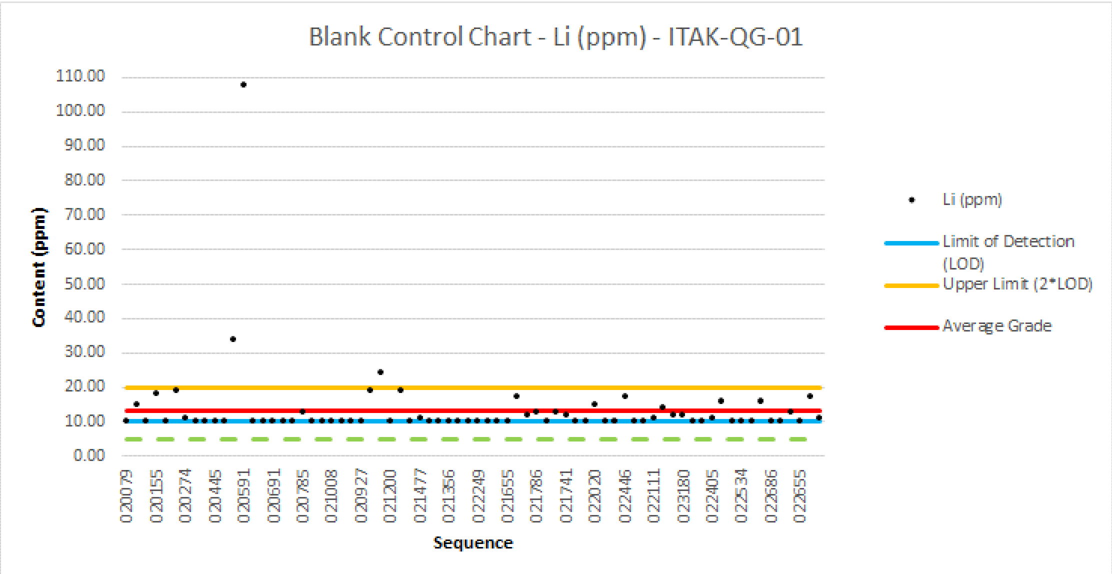


Figure 11-2: Blank Control Chart – ITAK QG-01.

11.5.2 Analytical Blank – Fine Blank

Analytical or Fine Blank samples are inserted in the analytical batches after the samples' physical preparation. This type of blank sample is used to assess contamination problems that might occur in the sample digestion or sample fusion processes and/or to evaluate analytical equipment (in this case, ICP-OES) miscalibrations. Blank Samples are inserted at the beginning of the possibly mineralized intervals, following the sequence:

- Mineralized sample.
- Analytical/Fine Blank.
- Preparation/Coarse Blank.

If an unmineralized batch is assembled, blank samples must be inserted at the beginning of the batch.

For its QAQC Program, Lithium Ionic uses two commercial Fine Blank samples: ITAK-QF-16 and ITAK-QF-18. No samples of this control type have returned grades higher than the 2x Detection Limit threshold, indicating no contamination or calibration problems in the final stages of the geochemical analysis. Figure 11-3 and Figure 11-4 present the Analytical Blanks control charts for Lithium:

Type of control	Blank
Reference	ITAK QF-16
Variable	Li ppm
Number of analysis	55

Blank Code	**QF-16**
Limit of Detection (LOD)	**10.0**
Upper limit (2 x LOD)	**20.0**
Reference Value (REF)	36.6
Standard deviation	2.956

Minimum	10.0
Maximum	19.0
Average	12.5
Median	11.0

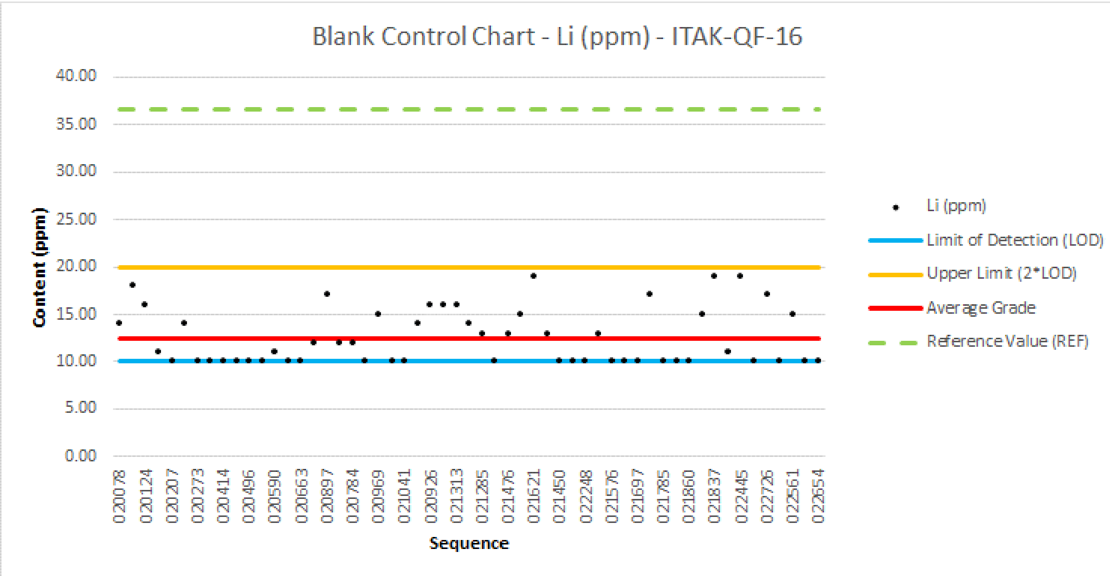


Figure 11-3: Blank Control Chart – ITAK QF-16.

Type of control	Blank
Reference	ITAK QF-18
Variable	Li ppm
Number of analysis	17

Blank code	QF-18
Limit of Detection (LOD)	10.0
Upper limit (2 x LOD)	20.0
Reference Valeu (REF)	18.3
Standard deviation	2.580

Minimum	10.0
Maximum	18.0
Average	13.2
Median	14.0

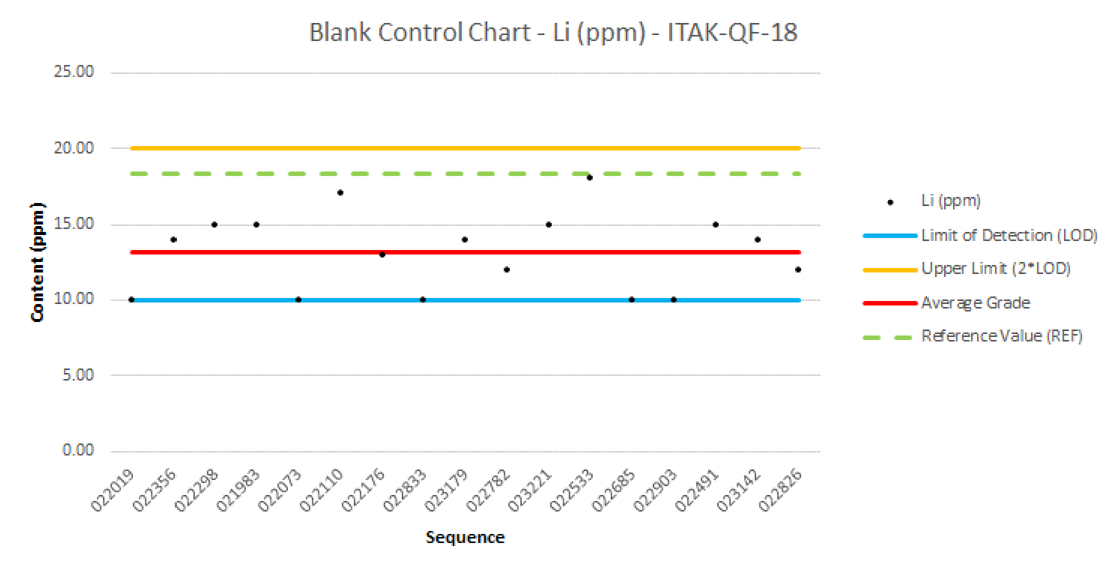


Figure 11-4: Blank Control Chart – ITAK QF-18.

11.5.3 Certified/Standard Reference Material – CRM/SRM

Certified or Standard Reference Materials are reference materials for which one or more parameters have been certified by a technically valid and recognized procedure. A certifying body has issued a Certificate or other accurate documentation. These materials are used as Quality Control Samples to evaluate the accuracy of the analytical methods and procedures used.

Lithium Ionic uses 2 CRMs in the Baixa Grande target: ITAK – 1100, ITAK – 1101. These Reference Materials evaluate high, and low-grade assay results.

High-grade reference materials are inserted at the beginning of the possible mineralized zones. The insertion can occur immediately or a few samples before the mineralized zone. The low-grade Materials are inserted at the end of the zone where the geologist interprets mineralization. The insertion can be immediately after or a few samples after the mineralized zone. The order of the Reference Materials can be changed based on geological features or mineralization characteristics.

Figure 11-5 to Figure 11-6 present Lithium's CRM control charts. From the 143 CRM assay results, approximately 60% are constrained within the 2x Standard Deviation limits. Considering a 3x Standard Deviation upper and lower limit, almost 90% of the samples are constrained within these boundaries. Both Certified Materials assays have presented biases below 1.5%. Two results of CRM ITAK 1101 present values below detection limit. Lithium Ionic had identified that this samples were identified with wrong name by mistake in the database. This information will be reviewed by Lithium Ionic team.

Type of Control	CRM
Reference	ITAK-1100
Variable	Li (%)
Number of analysis	70

Code	ITAK-1100
Certificate Value	0.2430
Standard Deviation	0.0036
Upper limit (+2SD)	0.2502
Lower limit (-2SD)	0.2358

Minimum	0.2286
Maximum	0.2588
Average	0.2462
Median	0.2470
Bias	1.31%

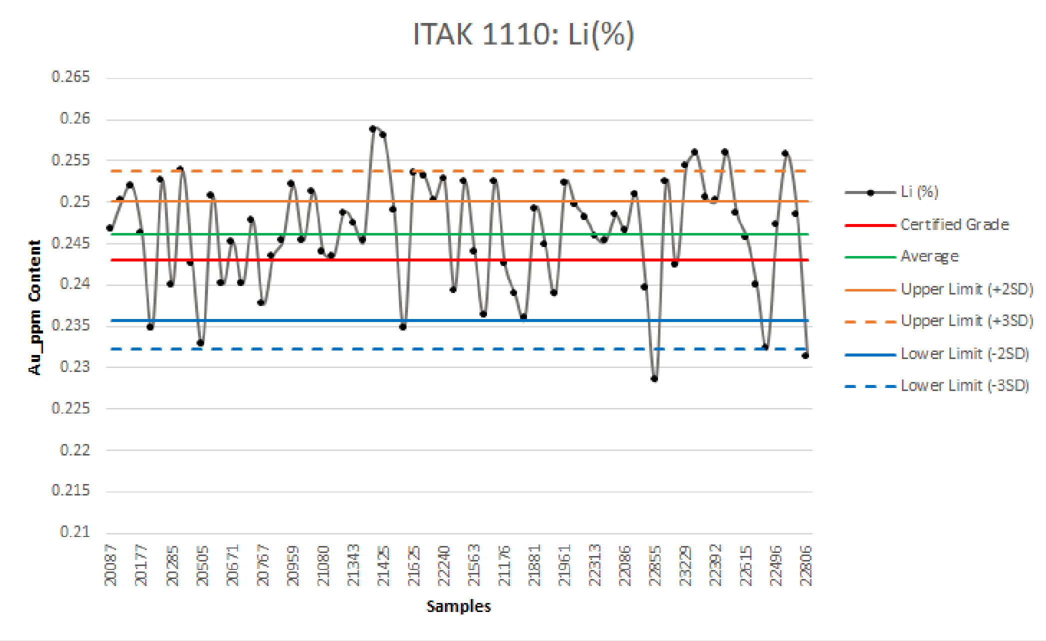


Figure 11-5: Standard Reference Material Chart – ITAK 1100.

Type of Control	CRM
Reference	ITAK-1101
Variable	Li (%)
Number of analysis	73

Code	ITAK-1101
Certificate Value	0.671
Standard desviation	0.010
Upper limit (+2SD)	0.691
Lower limit (-2SD)	0.651

Minimum	0.2556
Maximum	0.7155
Average	0.6723
Median	0.6832
Bias	0.199%

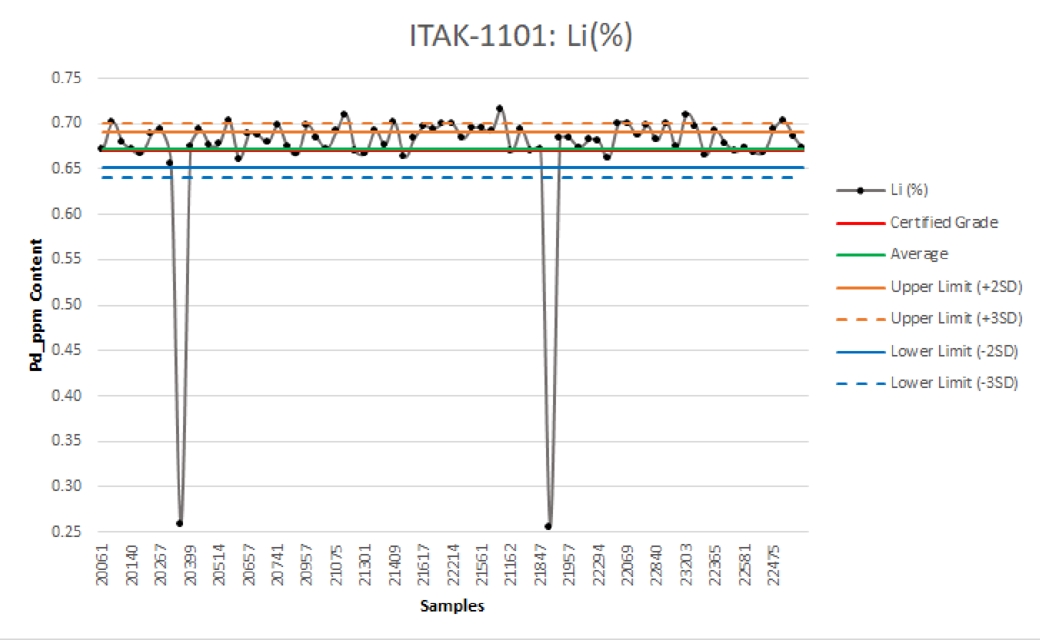


Figure 11-6: Standard Reference Material Chart – ITAK 1101.

11.5.4 Crushed Duplicates

Duplicates are used in the Quality Control program as a means of evaluating the precision of the geochemical analysis. Insertion of blind duplicates of crushed material are used to test the laboratory's reproducibility and if the crushing process is generating bias or imprecision in the results.

A total of 70 crushed duplicates were evaluated. Control charts for this control type show high correlations and a good reproducibility, with over 90% of the samples falling below the 10% HARD limit. Figure 11-7 presents the control chart.

Type of control	Duplicate
Reference	Crusher
Variable	Li (ppm)
Accuracy limit	10%
Pair Count	70

	SMP	DUP
Minimum	10.0	10.0
Maximum	10838.0	11364.0
Average	3425.1	3414.2
Median	2956.0	2947.5
Below HARD Accuracy Limit	92.9%	

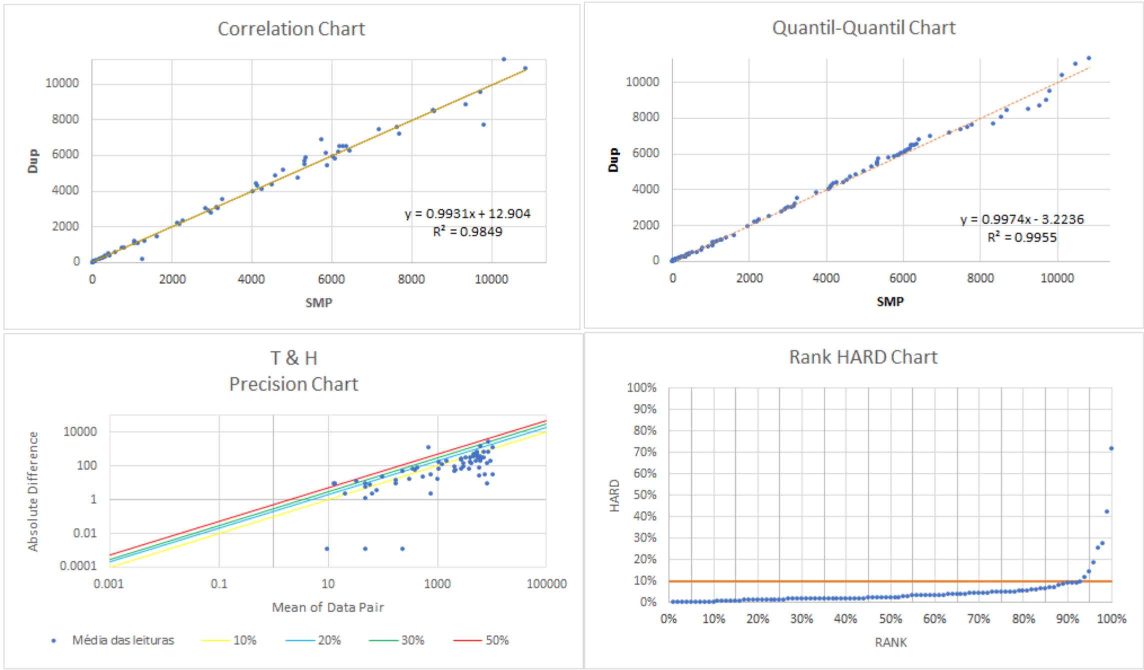


Figure 11-7: Crushed Duplicates Control Chart.

11.5.5 Pulverized duplicates

Duplicates are used in the Quality Control program to evaluate the geochemical analysis' precision. Insertion of blind duplicates of pulverized material is used to test the laboratory's reproducibility and if the milling process is not generating bias or imprecision in the results.

A total of 69 pulverized duplicates were evaluated. Control charts for this control type show high correlations and good reproducibility, with over 80% of the samples falling below the 5% HARD limit. Figure 11-8 presents the control chart.

Type of control	Duplicate
Reference	Pulverized
Variable	Li (ppm)
Accuracy limit	5%
Pair Count	69

	SMP	DUP
Minimum	10.0	10.0
Maximum	17060.0	16060.0
Average	3427.8	3427.8
Median	2135.0	2135.0
Below HARD Accuracy Limit	82.6%	

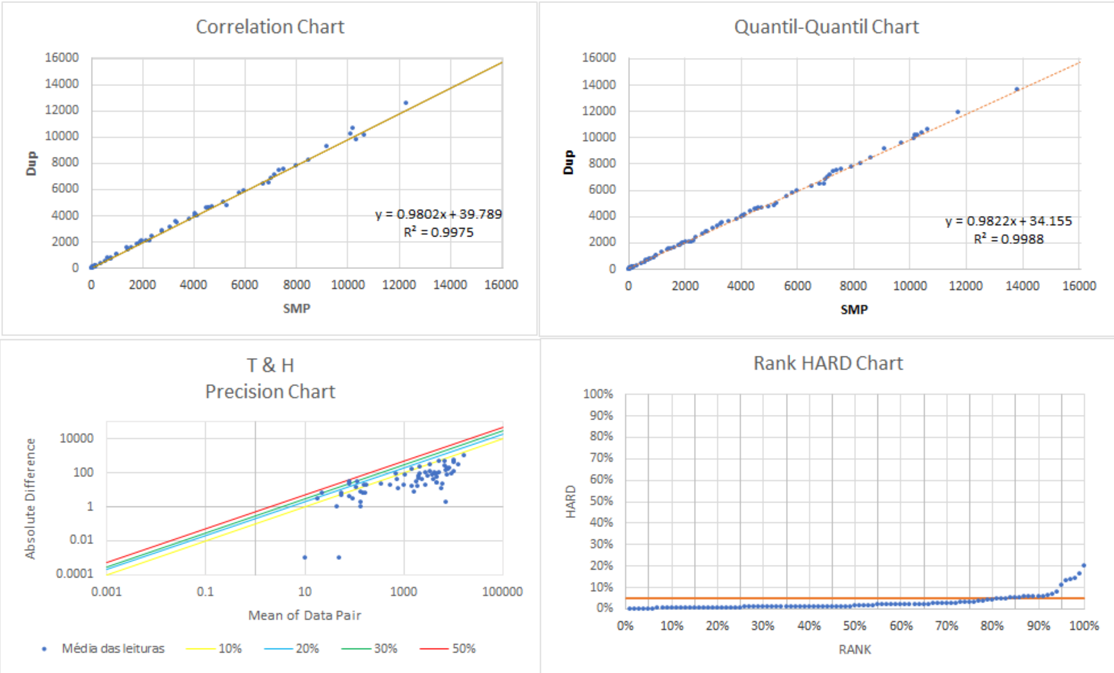


Figure 11-8: Pulverized Duplicates Control Chart.

11.6 QP Opinion

The Qualified Person believes that the sampling, sample preparation, security and analysis performed by Lithium Ionic and hired companies are suited for a Mineral Resource Estimation study. Quality Assurance procedures follow the industry's best practices, and Quality Control results are within industry standards, attesting to the quality of the assay information in the database.

12 DATA VERIFICATION

This section covers the data verification of the Baixa Grande Target from Salinas Lithium Project sampling, assay and survey procedures and quality with results stored in database used for the Mineral Resource estimate.

Data verification by the QP responsible for this section of the Technical Report, Leonardo de Moraes Soares who is a senior geologist from GE21, included one site visit between 13 and 14 of September 2023. Lithium Ionic allowed unlimited access to the Company's facilities during this time. During the site visits, QP checked in the field mineralization outcrops, drill rigs and core shed, as well as a review of information about exploration results, sampling procedures, sampling preparation, chemical analysis, topographic and drillhole deviation surveys, discussions about interpretation about mineralization model. Data from selected drill holes (sample custody, assays, QA/QC program, downhole surveys, lithologies, alteration and structures) was also checked and discussed with Lithium Ionic technical team.

12.1 Historical drilling data (Previous Operators)

For this report, historical data refers to all the data before 2023. On March 13, 2023, Lithium Ionic Corp. acquired 40% of the Salinas project from Neolit and subsequently increased its ownership to 85% in October 2023. Drilling campaigns carried out by Neolit before 2023 with 24 drill holes where redescribed by Lithium Ionic, but these campaigns were not resampled (Figure 12-1).

QAQC program was not implemented by Neolit, and Lithium Ionic decided to use the related information only to guide drilling planning and geological modeling, but assay information was not used to grade estimation or mineral resource classification.

The QP accessed Neolit campaign drill core boxes on Lithium Ionic core shed and checked some spodumene pegmatite drill hole intercepts during the site visit.

Figure 12-1: Historical drilling data – Neolit drilling campaign core boxes

12.2 Lithium Ionic drilling database (2015-2023)

The exploration data was maintained and validated at the project site by Lithium Ionic team. Physical copies of all the drill hole information and core boxes are managed and stored by Lithium Ionic Team at core shed and project office at same address located in Salinas Town (Figure 12-2).

Figure 12-2: Drill Core box and physical copies of all the drill hole information

12.3 Drillhole Logging

The geological description of drill cores is carried out by the responsible geologists using a paper logging spreadsheet and the subsequent data insertion into the official database by the same logging geologist. Firstly, drill hole ID, target, date of logging and core diameter were recorded. Then the geologist describing the lithological types with delimiting intervals that are representative of lithological contacts, structural information and weathering condition at the logging time (Figure 12-3). After that, sampling plan is generated at database management, including QAQC sample program inserted in the sample numbering sequence.

Lithological contacts were marked on the core box with a blue or black pen, on the left side of the trough.

Figure 12-3: Drillhole Logging bench

Drill core boxes was checked by QP comparing filled logging sheet with observed geological intercepts (generally hosting schists and spodumene pegmatites). The style of mineralization and mineralogical characterization observed in drill cores was discussed also with Lithium Ionic technical team, and the conceptual geological interpretation of the mineralization zones is considered as reliable for mineral resource estimate purposes.

In the opinion of Qualified Person, the geological logging is considered within the bests practices of mineral industry, and it is appropriated to be utilized for geological modeling for Mineral Resources estimate.

12.4 Drilling Methods and procedures

Drill hole rig sites were checked by QP during site visit. Current Lithium Ionic's drilling campaigns operated by Geosol drilling company carries on in the Baixa Grande Target on Salinas project (Figure 12-4). Drilling methods and sampling procedures verified at rig sites are considered as compliant with best mineral industry practices. Drill core boxes are correctly identified by aluminum plates with hole number, depth interval and box number. Runs are also well identified by depth, run length and core recovery.

Site Safety Signs and safety fences and plastic chains directed to preserve safety, indicate risks and personal protective equipment, and isolate the operational area were verified at rig sites. This set of standardized procedures recognized by QP as being in accordance with good practices for the industry.

Figure 12-4: Drilling Methods and procedures

12.5 Style of Mineralization

Field checks on pegmatite outcrops on the field and inspection of drill hole intercepts on core shed and in drill rig sites were caried out by QP. It was possible to certify that the interpretation of mineralization model is compliant with the style of mineralization described on geological inspection (Figure 12-5).

Figure 12-5: Style of Mineralization observed at the field outcrops and drill core intercepts

12.6 Collar Location Validations

All drill hole collar locations are surveyed using GPS Geodetic method. Collar surveying measurements was done by third party contracted team and were monitored and audited by Lithium Ionic's geologists.

QP inspected some drill hole collar landmarks at Baixa Grande target on the field. Coordinates registered on aluminum plates were compared with handheld GPS coordinates and located on drillhole location map (Figure 12-6). No Issues were detected by the QP.

Figure 12-6: Collar Location Validations

12.7 Downhole Survey and Core Orientation Validation

Downhole surveys have been completed on all diamond drill holes. Core orientation was applied on Lithium Ionic drilling campaigns. These surveys are registered on database by Reflex company professional tools data. Systems were presented to QP on the core shed (Figure 12-7).

Figure 12-7: Downhole Survey and Core Orientation Validation

12.8 Analytical Validations

Analytical validations, including QAQC program and analysis of results also presented in the Chapter 13 of this report were discussed in the technical visit with the technical responsible. All the procedures are considered based on best industry practices, and the results are considered as inside acceptance limits by the QP.

12.9 Qualified Person's Opinion

The QP has reviewed the adequacy of the exploration information and the visual, physical, and geological characteristics of the property and has found no significant issues or inconsistencies that would cause one to question the validity of the data. The QP is satisfied to include the exploration data including the drilling, drill litho-logs, and sample assays for the purpose of resource modelling, evaluation and estimations as presented in this report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The lithium minerals present in the pegmatites of the Baixa Grande deposit have been routinely characterized through systematic logging of drilling cores. From core intervals selected samples are taken through the description of thin polished sections under an optical microscope. Those descriptions, macroscopic (log) and microscopic (thin sections) are accompanied by modal evaluation (in vol%) of spodumene versus matrix contents, and within the matrix, the quantities of minerals identified, particularly those that may significantly interfere with ore processing.

The spodumene ore from the Baixa Grande deposit contains the following main gangue minerals: albite, quartz, perthitic potassium feldspar and muscovite.

There are two main processes to be used to concentrate the spodumene content in the pegmatite ore; Dense Media Separation, if the Li_2O size liberation is coarse above 9.5mm, or flotation. Both processes can produce spodumene concentrate under the marketing specification of $L_{i2}O$ grade above 5.5% and Fe_2O_3 below 1%.

Three samples were collected from Sobradinho, Cubo and Oeste for a preliminary ore sorter and HLS tests conducted by Steinert and SGS Geosol, respectively.

13.1 Samples Selected for Preliminary Test work

For conducting ore sorter and HLS tests with Salinas ore, drill core samples from three different project bodies were selected: West, Sobradinho, and Cubo.

The sample from the Oeste ore body comprised drill holes BGDD-23-046 and BGDD-23-074, both of which exhibited fractures along the selected intersections.

The sample from the Sobradinho ore body consisted of drill hole BGDD-23-079, and the sample from the Cubo ore body consisted of drill holes BGDD-23-102 and BGDD-23-109. In all three of these drill holes, the selected intersections exhibited intact pegmatite without fractures.

Figure 13-1 to Figure 13-3 shows the sample intersected for each drill hole.

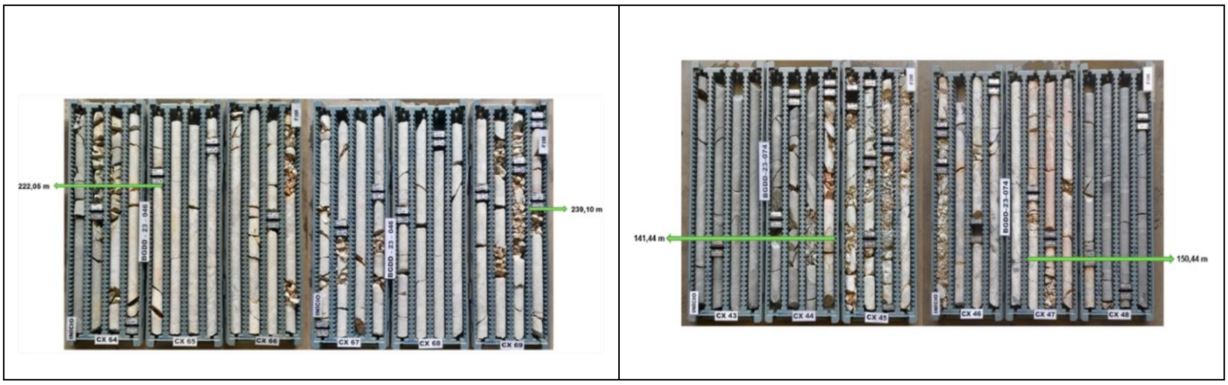


Figure 13-1: Selected intersection from drill hole BGDD-23-046 and 074 (Oeste)

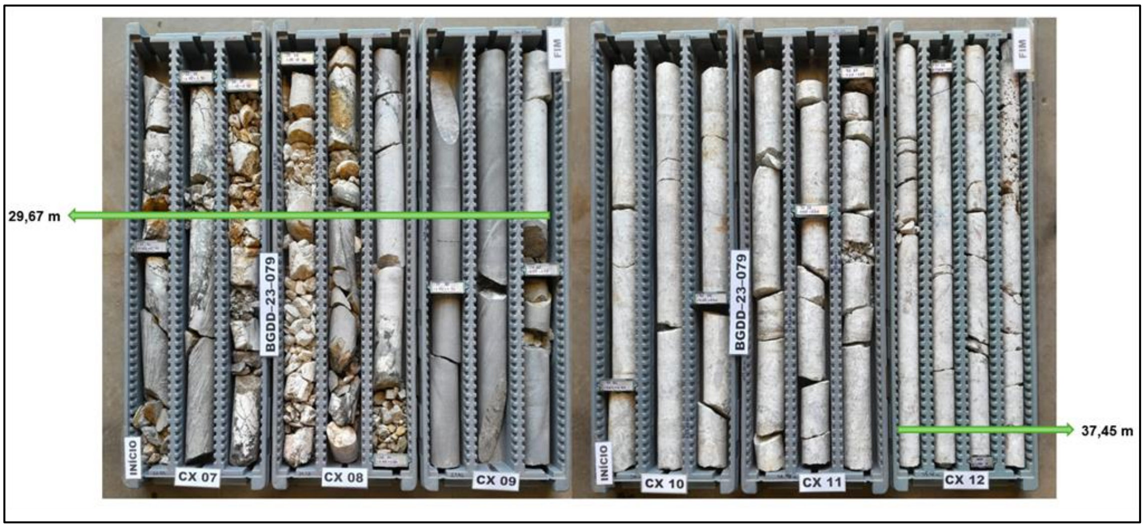


Figure 13-2: Selected intersection from drill hole BGDD-23-079 (Sobradinho)

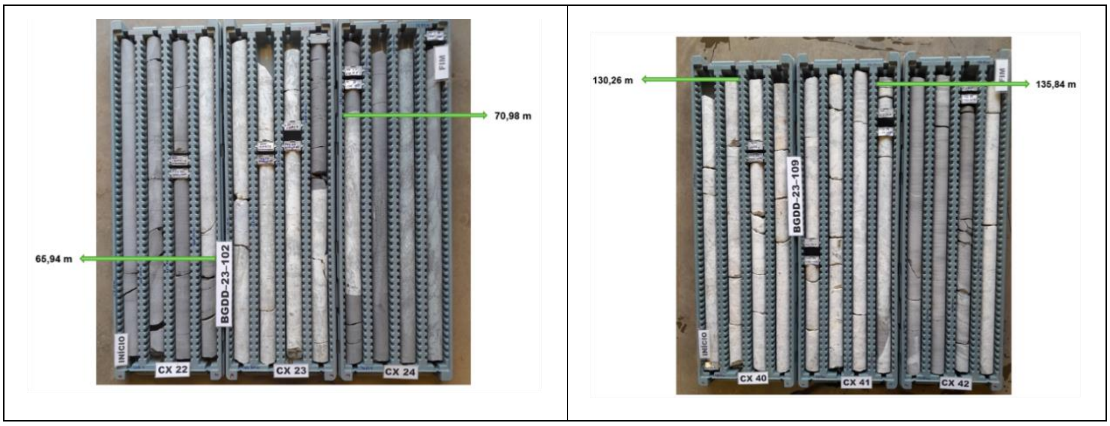


Figure 13-3: Selected intersection from drill holes BGDD-23-102 and 109 (Cubo)

Figure 13-4 presents the Baixa Grande map showing the three ore bodies and drill holes location where the samples were selected.

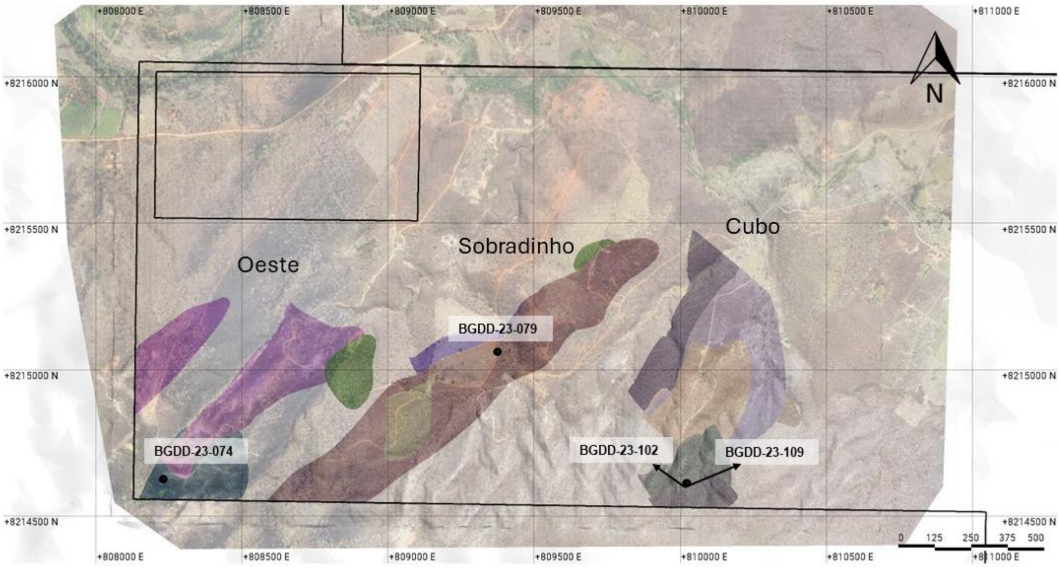


Figure 13-4: Baixa Grande deposit showing drill holes location for samples selection.

Table 13-1 below presents chemical analysis for these three samples from Baixa Grande deposit.

Table 13-1: Chemical analysis for selected samples for metallurgical tests.

BAIXA GRANDE ORE BODIES	Ba	Be	CaO	Fe2O3	K2O	Li2O	MgO	Nb	P2O5	Sn	Ta
	ppm	ppm	%	%	%	%	%	ppm	%	ppm	ppm
OESTE	40	182	0,28	1,27	1,93	0,95	0,27	<10	0,17	60	<10
SOBRADINHO	45	131	0,43	1,31	2,83	1,11	0,22	<10	0,27	<50	16
CUBO	194	192	0,87	1,94	2,55	1,01	0,56	15	0,23	<50	15

Lithium oxide grade ranges from 0.95 to 1.11% for the three samples. Iron oxide is above the spodumene concentrate spec limit of 1%. Rare elements like niobium, tantalum, phosphate, and tin are quite low. K-feldspar may be on the level around 15-20%, based on the potash oxide content.

The flowsheet, shown in Figure 13-5, evaluated simulate spodumene concentration by dense media separation and by a combination of ore sorter and dense media separation as shown in Figure 1. The particle size used in ore sorter tests was -31.5+19.5mm and -19.5+7.5mm. Three heavy liquid densities were used (2.7 g/cm³, 2.8 g/cm³ and 2.9 g/cm³) and two particle size range (-12.7+6.35mm and -6.35+0.5mm).

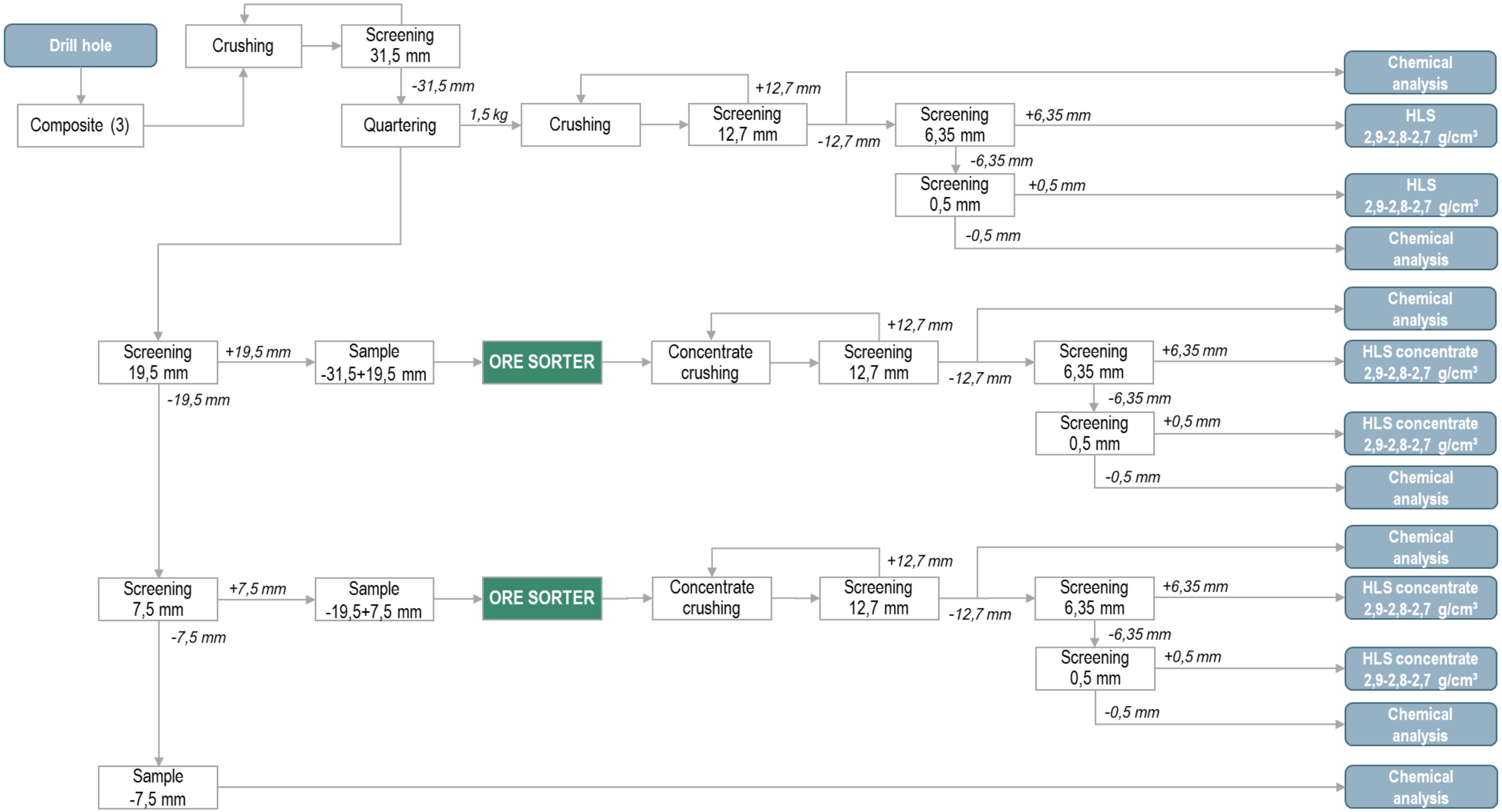
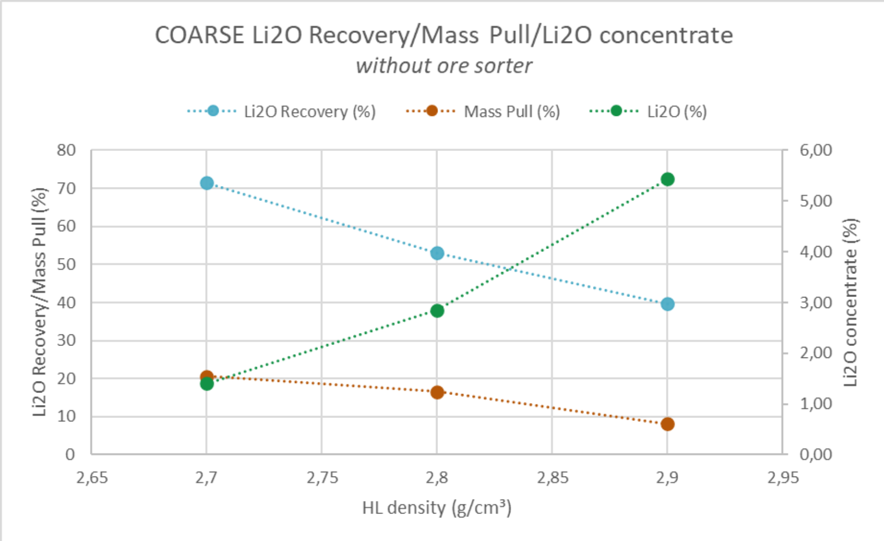


Figure 13-5: Test work program flowsheet.

13.2 TEST WORK RESULTS

The average HLS results without pre concentration are presented in Figure 13-6 for coarse and fines fractions. The selected core drill results for the HLS tests indicated that the spodumene size liberation is around 9,5mm to generate concentrate under marketing specification.

(a)



(b)

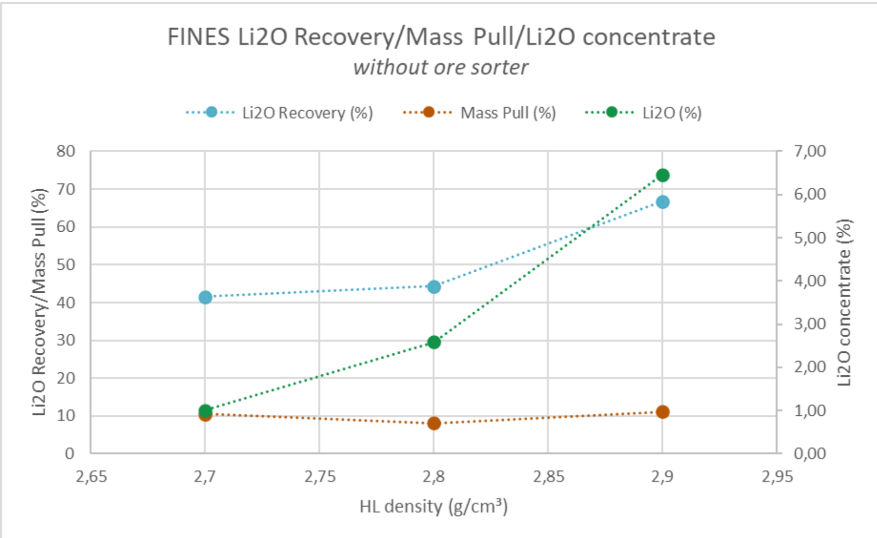


Figure 13-6: HLS results without ore sorter.

For the combined flowsheet, using ore sorter and HLS the results are shown in Figure 13-7. It was possible to obtain spodumene concentrate within marketing spec for Li_2O grade.

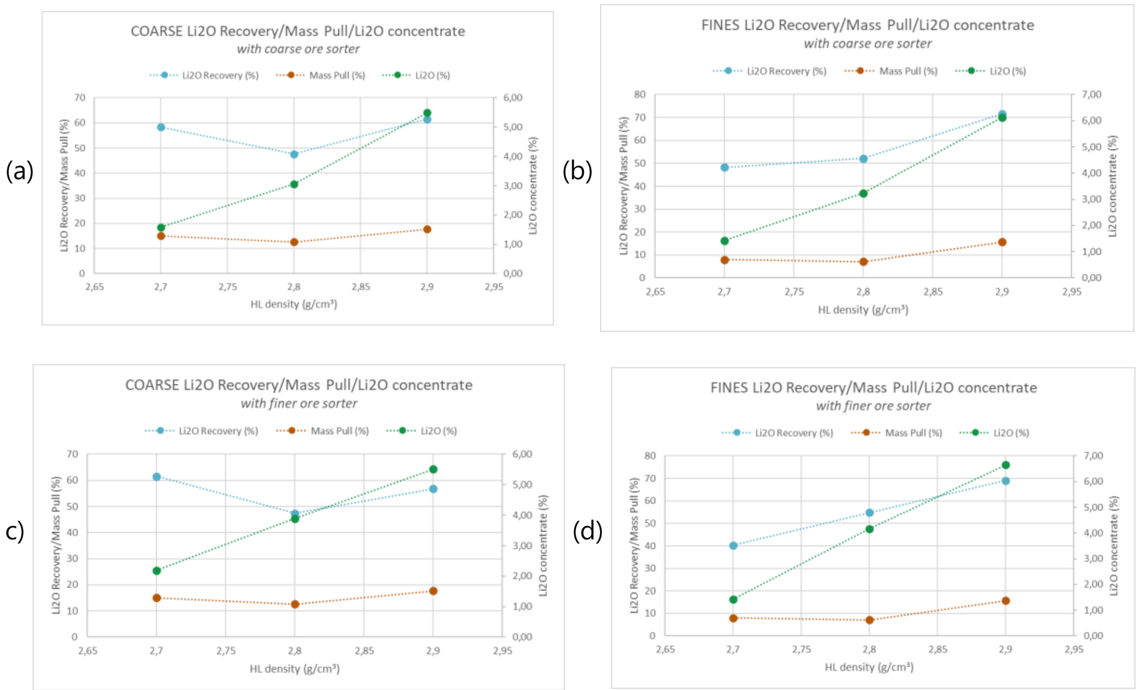


Figure 13-7: HLS results for tests with ore sorter.

For the ore sorter, it was achieved good Li_2O upgrade in the concentrate, 1.34 and 1.39, for the fine and coarse size fraction, respectively. Lithium oxide recovery for the ore sorter step was 79.8% and 86.1%, shown in Figure 13-8. New tests are being scheduled to remove less mass and increase lithium recovery to the concentrate.

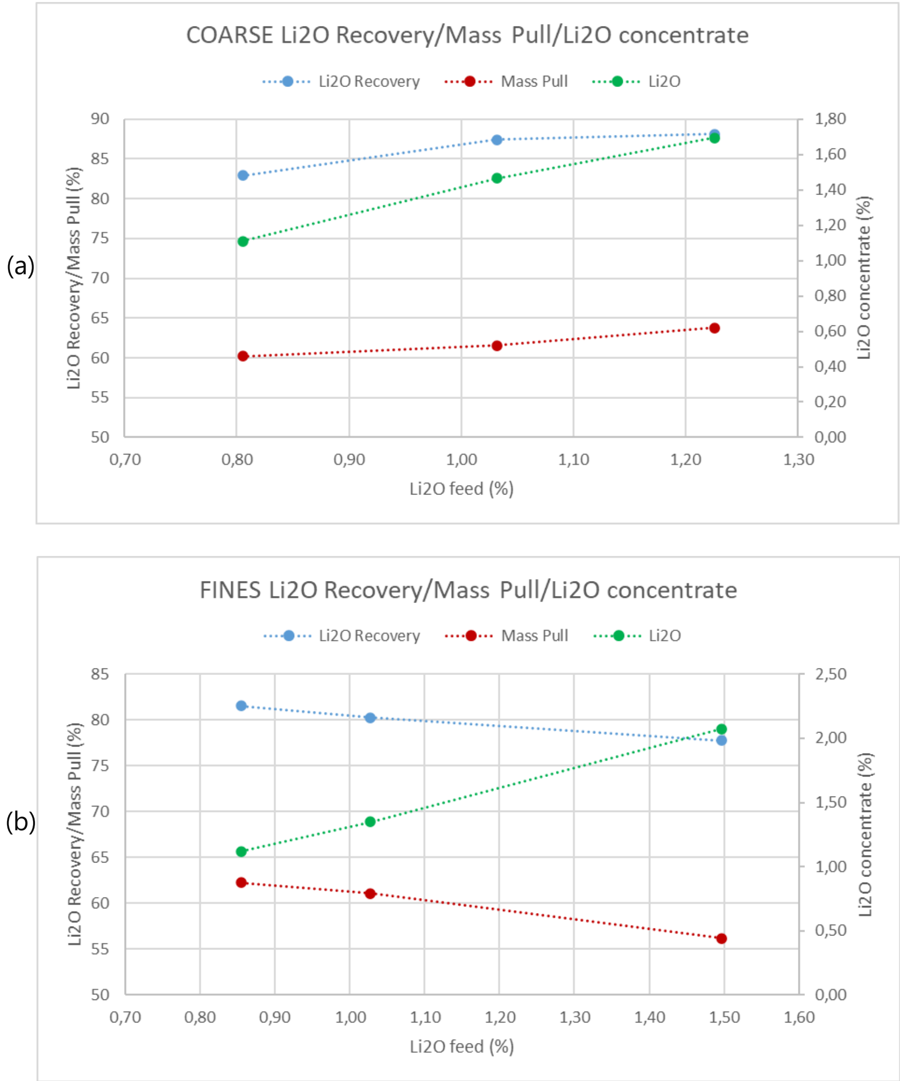


Figure 13-8: Ore sorter results.

13.3 Conclusion

The three mineralization samples from the Baixa Grande project presents encouraging results for the preconcentration through ore sorting and concentration process using Dense Media Separation (DMS). However, more tests using diluted samples (simulating the mining technique) must be done to support engineering process development to define spodumene size liberation, Li_2O recovery, Li_2O concentrate grade and mass recovery to the concentrate.

13.4 QP Opinion

The tests with the composited sample indicate that it is suitable for concentration using heavy liquid separation, with and without preconcentration with sensor-based sorting.

It is strongly recommended to increase the amount of metallurgical test works, including variability samples covering the whole deposit, to confirm the process route.

Heavy Liquid Separation (HLS) is an exploratory characterization and indicates the suitability of the method to the sample tested. It is strongly recommended to carry out test works with Dense Media Separation (DMS) to confirm the results obtained.

A mass balance, considering the entire process – preconcentration and concentration, is required.

14 MINERAL RESOURCE ESTIMATES

Lithium Ionic conducted comprehensive 3D geological modelling, statistical and geostatistical studies, and grade estimation for the Baixa Grande roperty. This estimation considered various factors, such as the quantity and distribution of available data, interpreted controls on mineralization, mineralization style, and the quality of the sampling data. GE21 caried out a validation process of mineral resource estimate for the Baixa Grande Target from Lithium Ionic.

The geological modelling and estimation processes were executed utilizing Leapfrog 2023.1 software. The UTM Projection – Zone 22 South in SIRGAS 2000 Datum was adopted as the reference coordinate system for the database in this project.

14.1 Drilling Database

The database underwent a comprehensive visual validation, considering the interrelation of tables, identifying gaps and overlaps, and ensuring the inclusion of crucial information. Additionally, using Leapfrog Geo software, GE21 conducted validation checks on the Collar, Survey, Assay, and Lithology tables. This stage of the work did not reveal any significant inconsistencies, as these had already been verified during the Data Verification stage.

Mineral Resource estimates were based on data derived from drill hole databases, incorporating lithology logs and assay results from HQ drill core samples. The topographic surface bounds the extent of these estimates. Figure 14-1 illustrates the spatial distribution of the utilized drill holes.

The original dataset provided by Lithium Ionic encompassed data from 122 surface diamond drill holes (totaling 27030.45 meters).

The Baixa Grande database contains 3276 assay intervals from drillholes totaling 3055.47 meters.

The assay table includes data for Li2O (%). Following a thorough review of the database, the Li2O (%) data was used for subsequent statistical analysis, block modelling, and resource estimation.

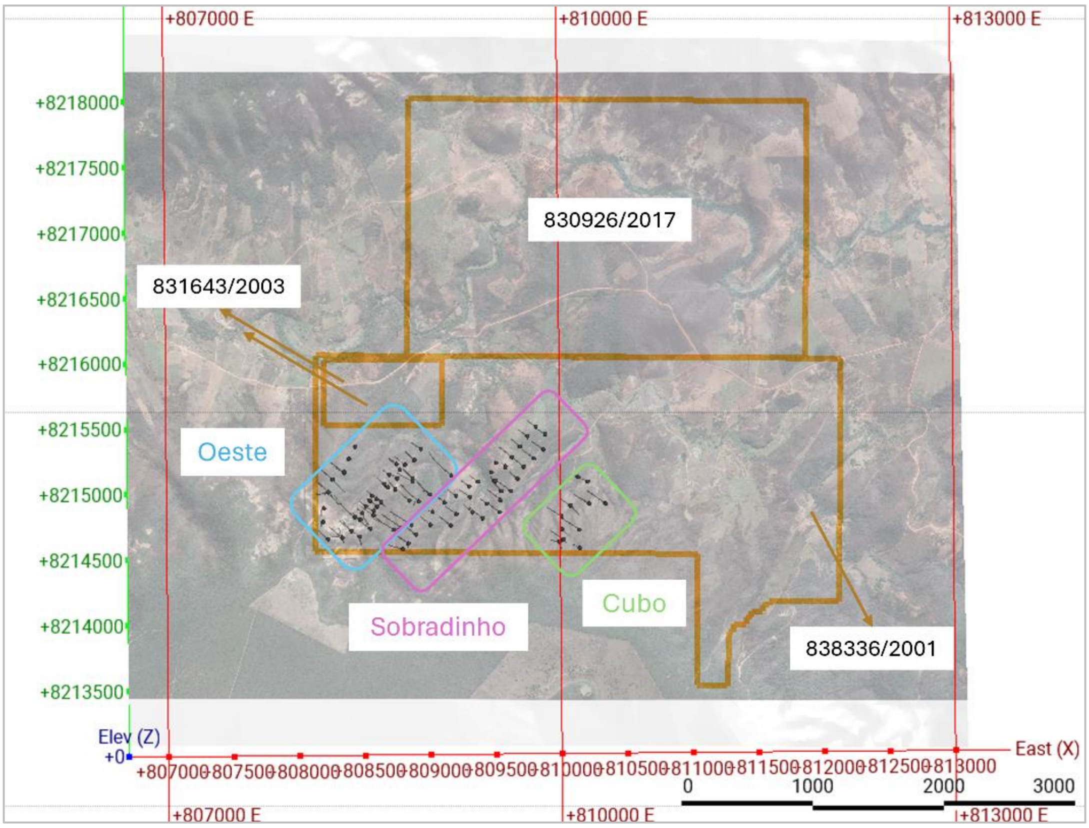


Figure 14-1: Drillhole Location Map.

14.2 Geological Modeling

Lithium Ionic undertook a geological interpretation, encompassing all documented spodumene pegmatite intervals within the Baixa Grande deposit. Initially, cross-sectional interpretations were crafted, utilizing traditional manual techniques and advanced cartographic software platforms such as QGIS, ArcGIS, and Leapfrog. These initial steps laid the groundwork for a robust modelling process.

A set of grade shell sections, with an envelope delimiting zones with a cut-off grade of 0.3% Li2O (%), was interpreted by the Lithium Ionic team (Figure 14-2 and Figure 14-3). The interpretations obtained were transformed into a set of implicit 3D models, each aligned with a distinct strike direction corresponding to its domain. (Table 14-1, Figure 14-4 and Figure 14-5).

Table 14-1: Strike directions for each domain.

Domain	Dip and Strike
Cubo	33º/116º
Oeste	49º/117º
Sobradinho	35º/ 151º

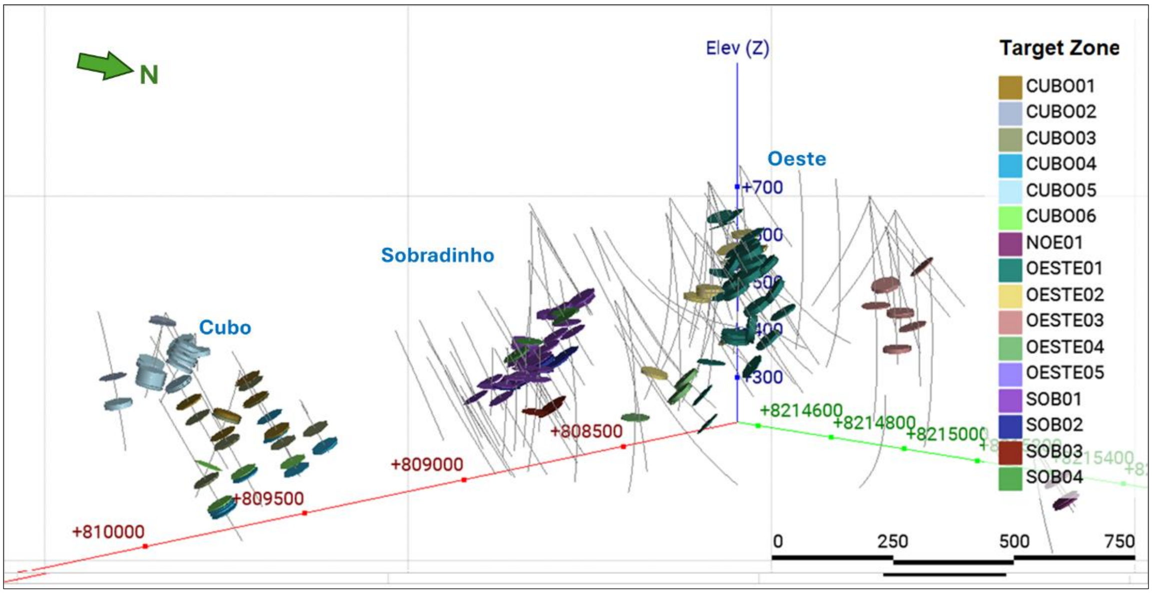


Figure 14-2: Assays Composites within the Li2O > 0.3% limit in pegmatites veins grouped by separated lenses and dykes.

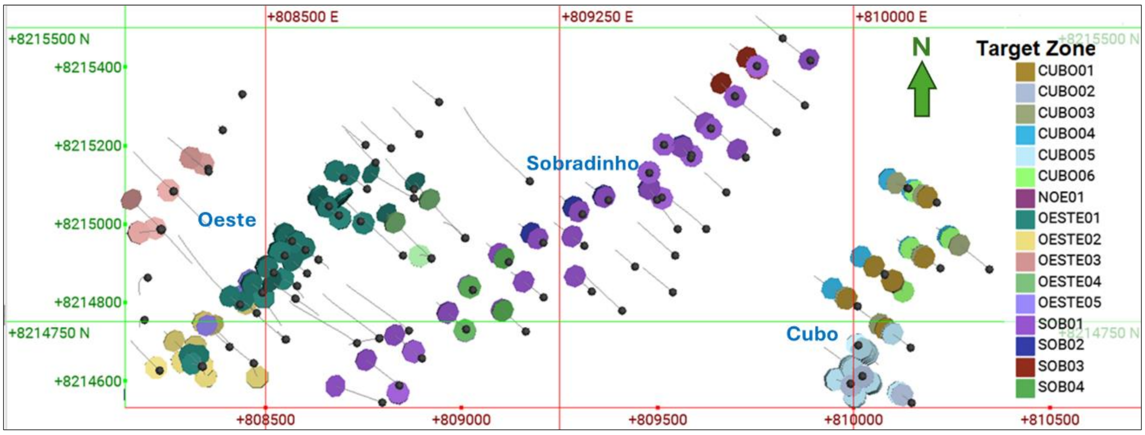


Figure 14-3: Plan view of assay Composites within the Li2O > 0,3% limit in pegmatites veins grouped by separated lenses and dykes.

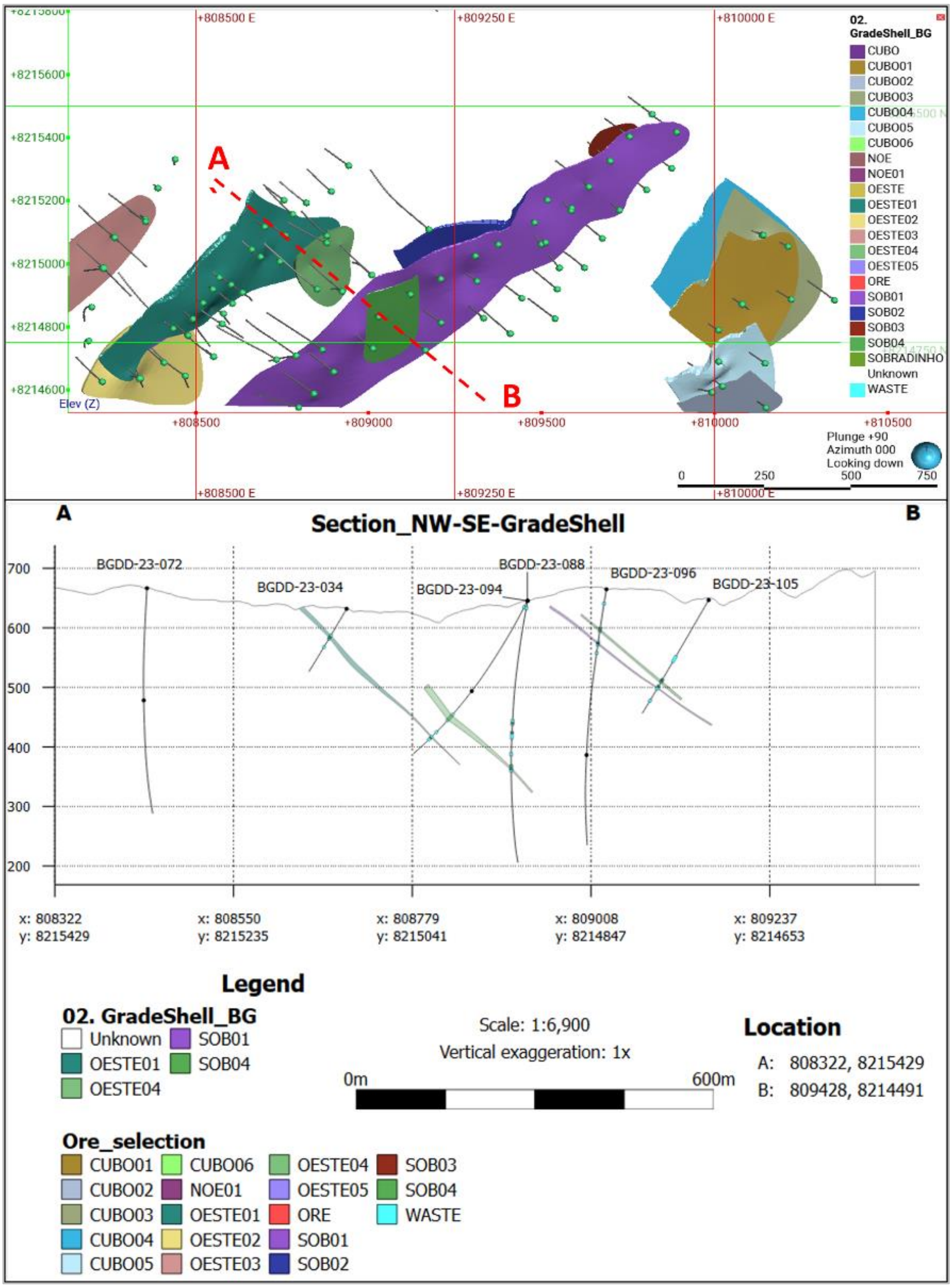


Figure 14-4: Spodumene grade shells modeled with assays composites Li2O > 0.3 % - horizontal view plan (left side) and section view (right view plan).

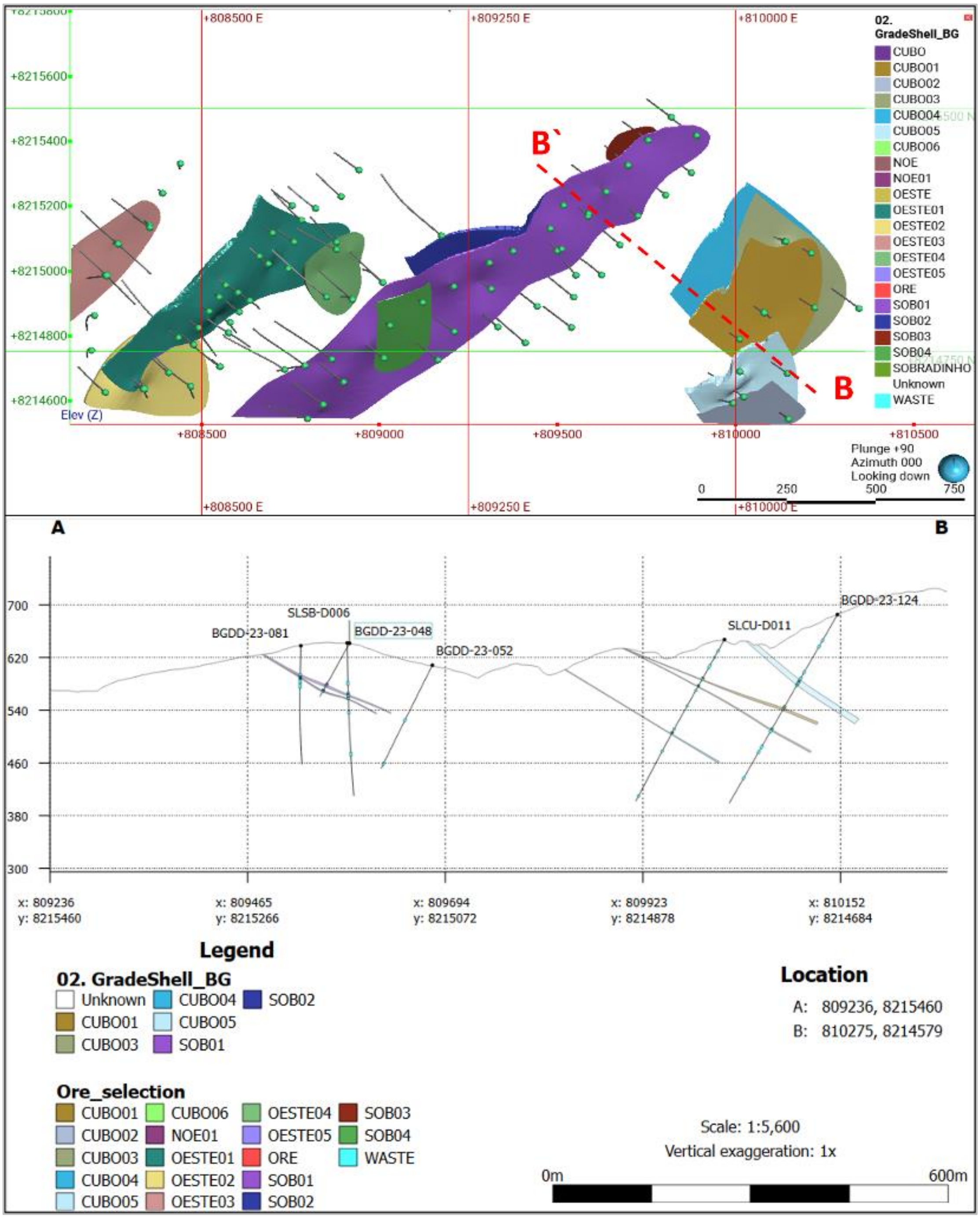


Figure 14-5: Spodumene grades shells model - assays composites Li2O > 0.3 % - section view.

Lithium Ionic also conducted weathering modelling based on the descriptions provided in the geological and geotechnical logging (Figure 14-6).

The Qualified Person considers the geological and mineralization 3D modelling method and interpretations as suitable for mineral resource estimation study, based on the coherence with conceptual mineralization model, adherence with drilling and sampling data and the spatial continuity of the grades inside the modeled pegmatites.

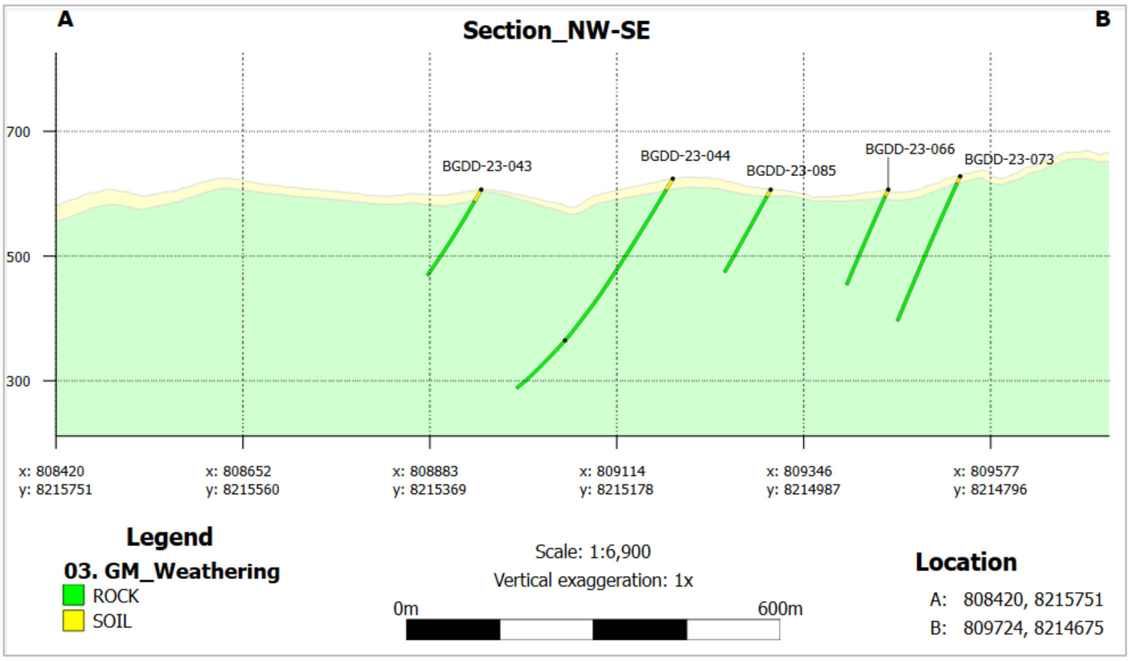


Figure 14-6: Weathering zone model section view.

14.3 Geostatistical Structural Analysis

14.3.1 Regularization of samples

The analysis of the sample support showed that more than 72% of the drilling samples have a length equal to 1 meter. GE21 caried out the regularization of samples in 1 meter for the complementary studies of statistics and geostatistics (

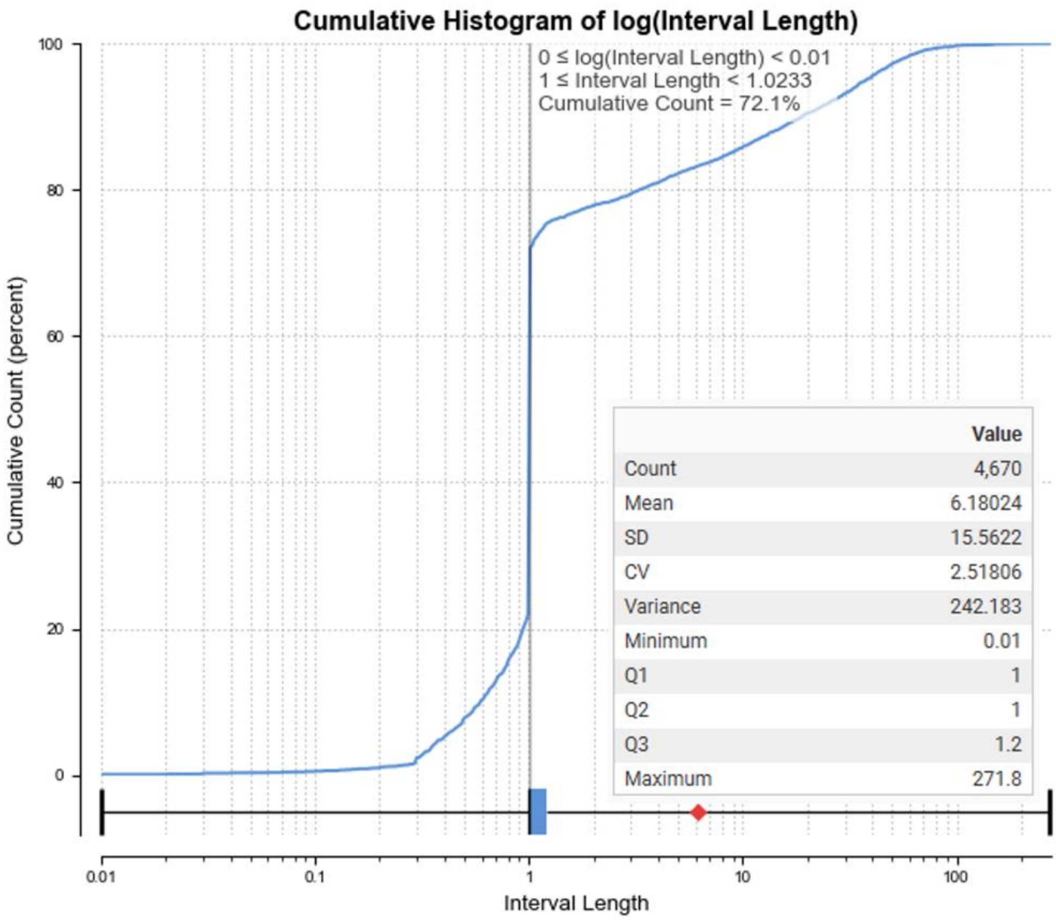


Figure 14-7). If the residual length of the composite is less than 0.20 meters, it is equally distributed within the domain boundary with a minimum coverage of 50%.

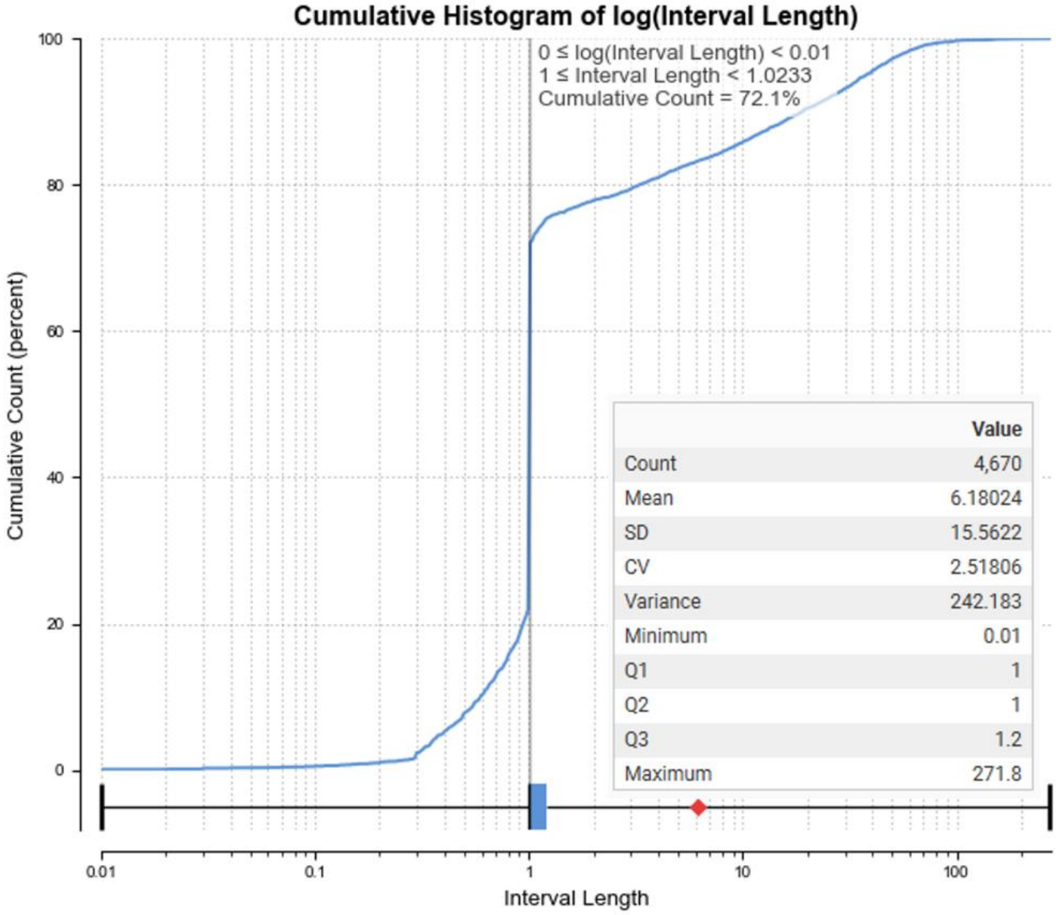


Figure 14-7: Baixa Grande Assays Interval Length Statistics.

14.3.2 Exploratory Data Analysis (EDA)

Statistical analysis on composited drilling samples was performed for the Li_2O% variable inside each modelled horizon. Figure 14-8 shows the boxplots and summary of statistics for pegmatite veins by target.

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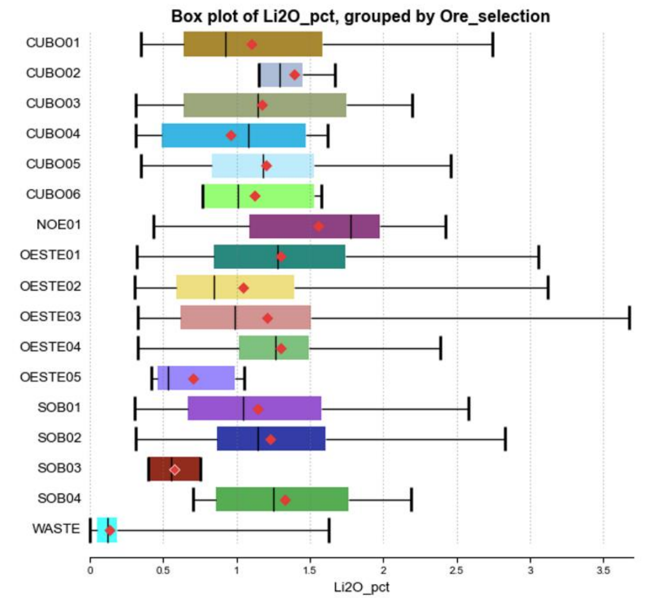

Name	Count	Length	Mean	Std. dev.	Coeff. var.	Variance	Minimum	L. quartile	Median	U. quartile	Maximum
Li2O_pct	3,326	3,055.5	0.363354	0.52208	1.43683	0.272567	0.002	0.071	0.154	0.326	3.673
CUBO01	19	17.2	1.098	0.673797	0.613657	0.454002	0.35	0.639	0.924	1.588	2.743
CUBO02	4	4.0	1.392	0.223383	0.160476	0.0499	1.151	1.151	1.295	1.449	1.673
CUBO03	21	17.4	1.16969	0.602297	0.514921	0.362762	0.314	0.636	1.143	1.747	2.195
CUBO04	19	18.6	0.956036	0.480816	0.502926	0.231184	0.312	0.492	1.078	1.47	1.621
CUBO05	133	128.0	1.20264	0.47281	0.393144	0.223549	0.345	0.828	1.178	1.528	2.461
CUBO06	7	5.5	1.12194	0.382105	0.340576	0.146004	0.765	0.767	1.006	1.526	1.574
NOE01	13	12.7	1.55458	0.566944	0.364692	0.321426	0.433	1.085	1.773	1.973	2.424
OESTE01	195	188.1	1.29723	0.597259	0.460412	0.356718	0.316	0.844	1.281	1.743	3.056
OESTE02	60	59.1	1.04704	0.632856	0.604422	0.400506	0.308	0.59	0.845	1.39	3.117
OESTE03	32	32.0	1.20634	0.788148	0.653337	0.621178	0.324	0.62	0.989	1.506	3.673
OESTE04	23	23.1	1.29869	0.458692	0.353197	0.210398	0.325	1.013	1.265	1.495	2.388
OESTE05	8	7.4	0.699536	0.268168	0.383351	0.0719141	0.416	0.46	0.534	0.99	1.051
SOB01	87	84.0	1.14192	0.569635	0.498841	0.324484	0.303	0.667	1.043	1.58	2.583
SOB02	30	28.1	1.23208	0.555058	0.450504	0.30809	0.313	0.863	1.144	1.606	2.832
SOB03	3	2.9	0.575	0.175762	0.305673	0.0308922	0.4	0.4	0.551	0.753	0.753
SOB04	10	9.8	1.33016	0.515436	0.387499	0.265675	0.703	0.862	1.251	1.763	2.189
WASTE	2,604	2,368.6	0.132044	0.107253	0.812247	0.0115031	0.002	0.051	0.118	0.185	1.629

Figure 14-8: Li2O (%) Spodumene Pegmatites Veins Model Statistics – Boxplots (left side) and Statistics Table (right side).

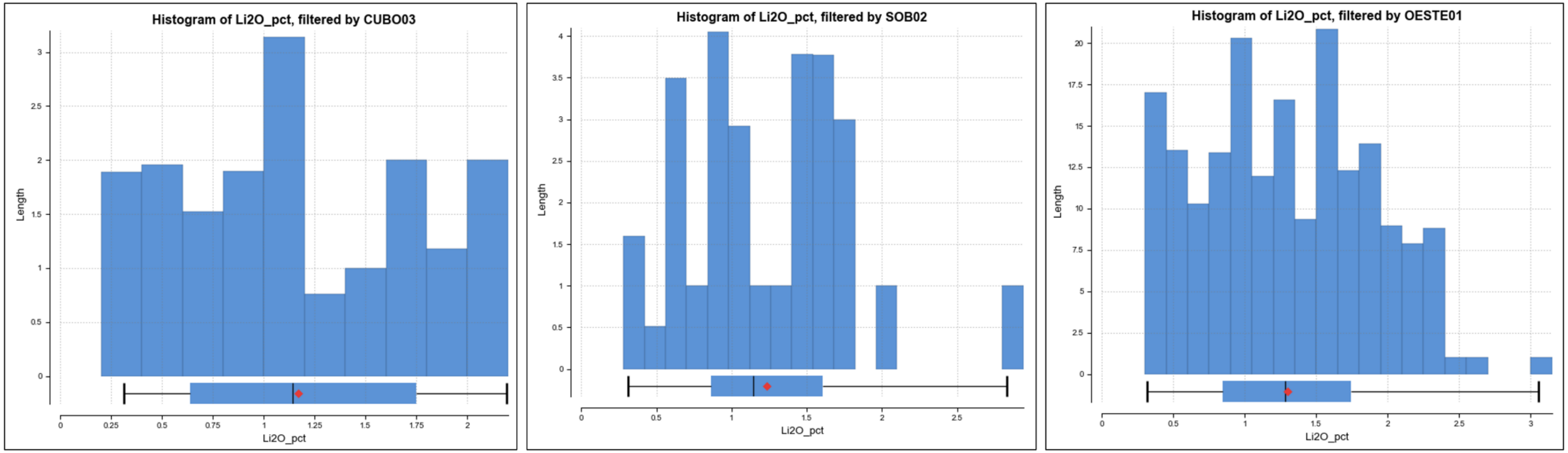

Figure 14-9: Li2O distributions in CUBO03, SOB02 and OESTE01 domains.

14.3.3 Variographic Analysis

The structural analysis of the domains was conducted to determine the variographic parameters, which are essential for determining the spatial continuity model of the grade variables and for the grade estimate.

Variograms were generated explicitly for Li_2O% within the spodumene pegmatite suite. This approach considered the geological similarity among them, enhancing the robustness of the variograms. Three distinct sets of veins were considered:

- Cubo
- Oeste
- Sobradinho

The variographic analysis was executed using Leapfrog Edge software. Figure 14-10 to Figure 14-13 show the variograms for the Li_2O% variable for each set of pegmatite domains. Additionally, Table 14-2 presents the variographic parameters obtained from all conducted analyses. These parameters were applied in the process of grade estimation.

Table 14-2: Variographic Parameters.

Domain set	Variance	Nugget	Normal. Nugget	Structure Number	Sill	Normal. Sill	Major	Semi Major	Minor	Dip	Dip Azi.	Pitch
Variographic structures type: spherical												
Cubo	0.29	0.0145	0.05	1	0.098	0.338	90	50	1.3	42	116	135
				2	0.177	0.611	100	60	4			
Oeste	0.438	0.065	0.15	1	0.172	0.394	68	90	1.5	43	115	113
				2	0.199	0.455	102	102	7.5			
Sob.	0.352	0.05	0.15	1	0.045	0.128	118	6	2.3	32	153	176
				2	0.254	0.721	170	73	1.9			

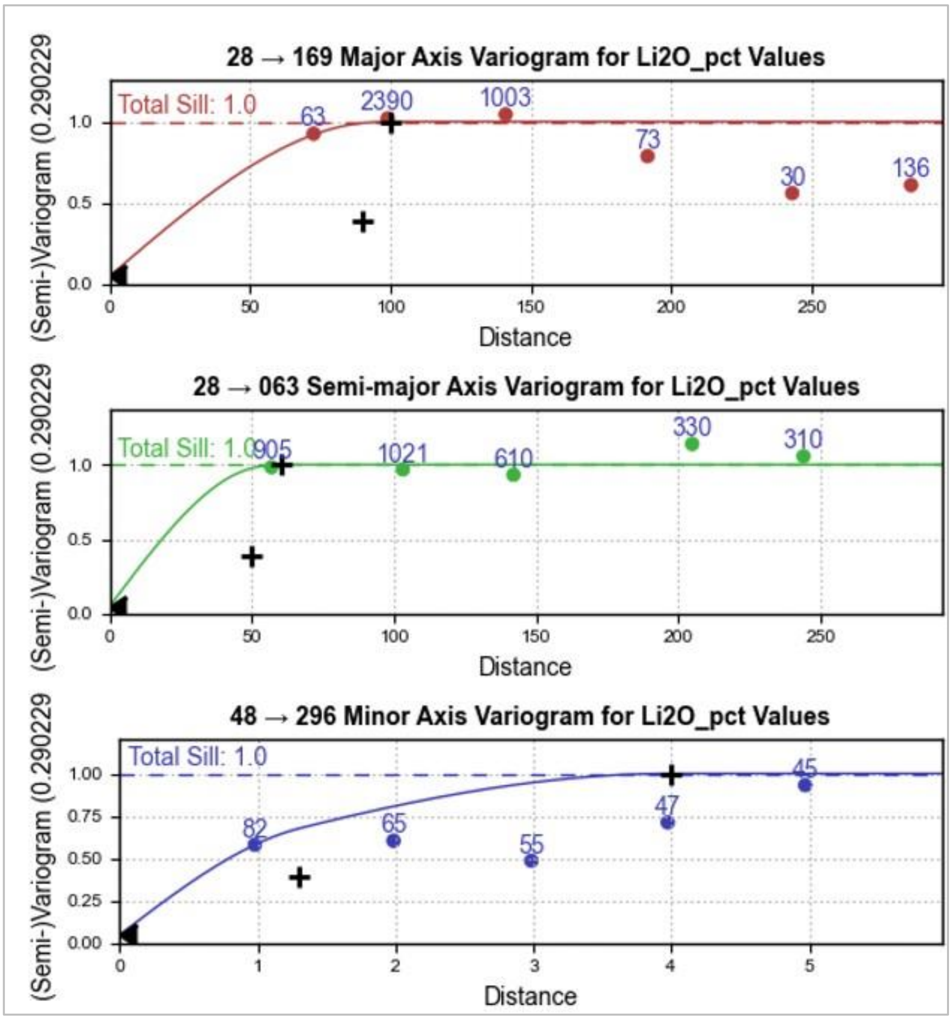

Figure 14-10: Variographic Model – Cubo

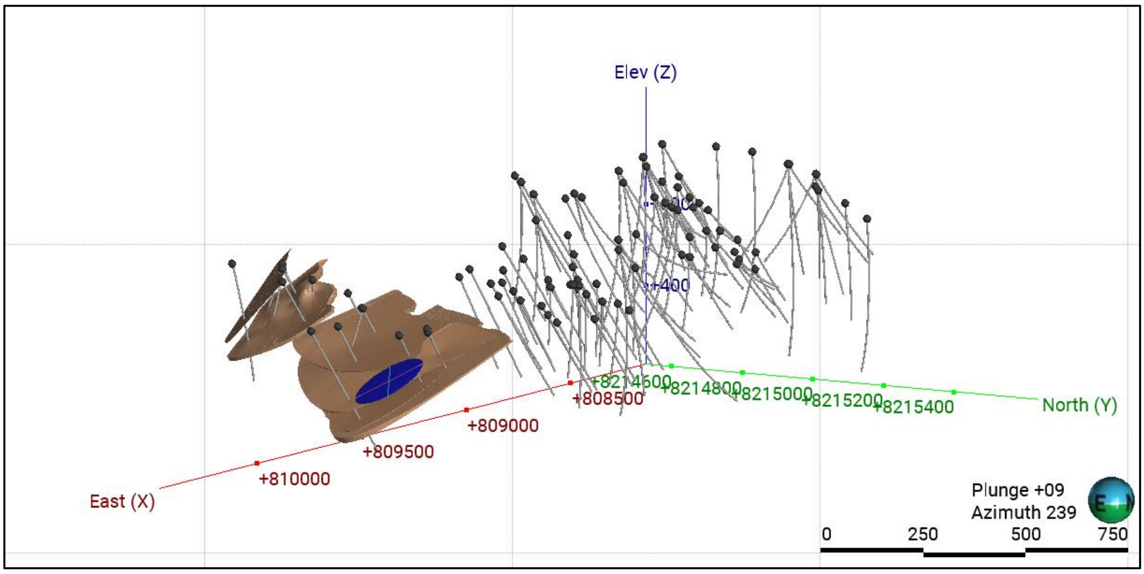

Figure 14-11: Variographic Ellipsoid –Cubo.

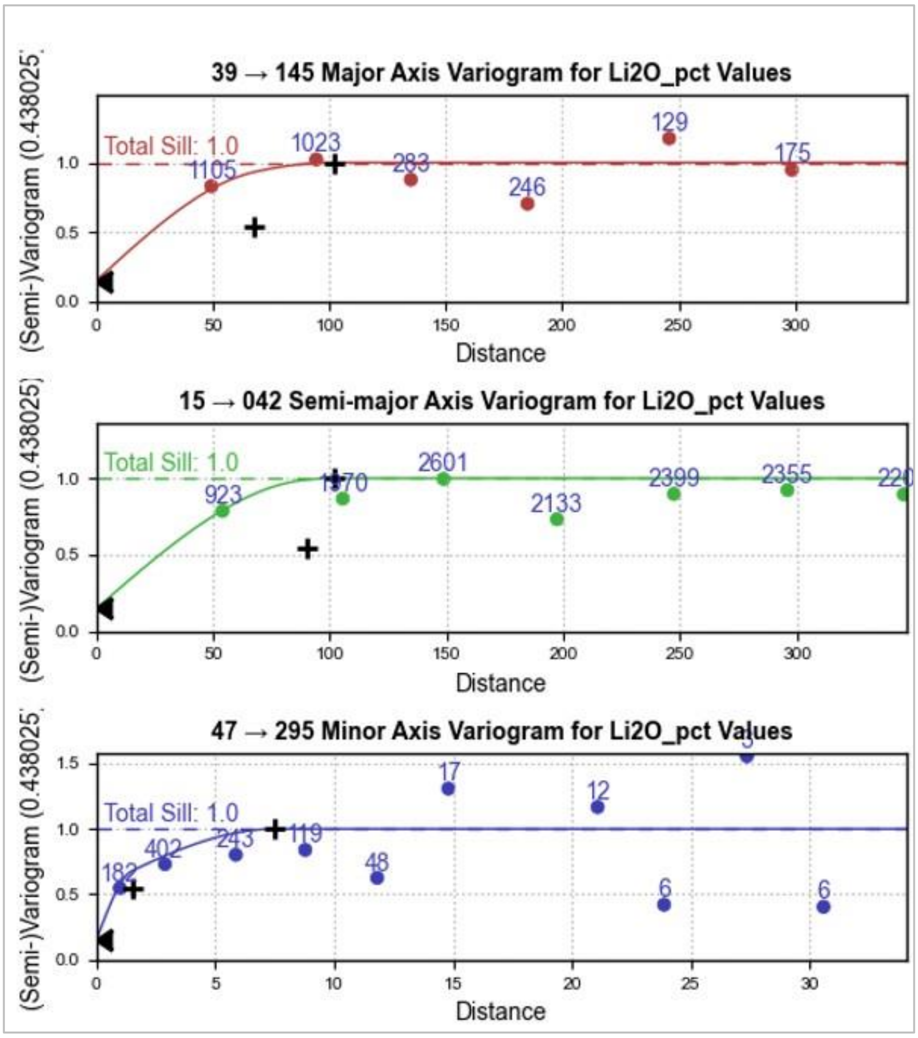

Figure 14-12: Variographic Model – Oeste.

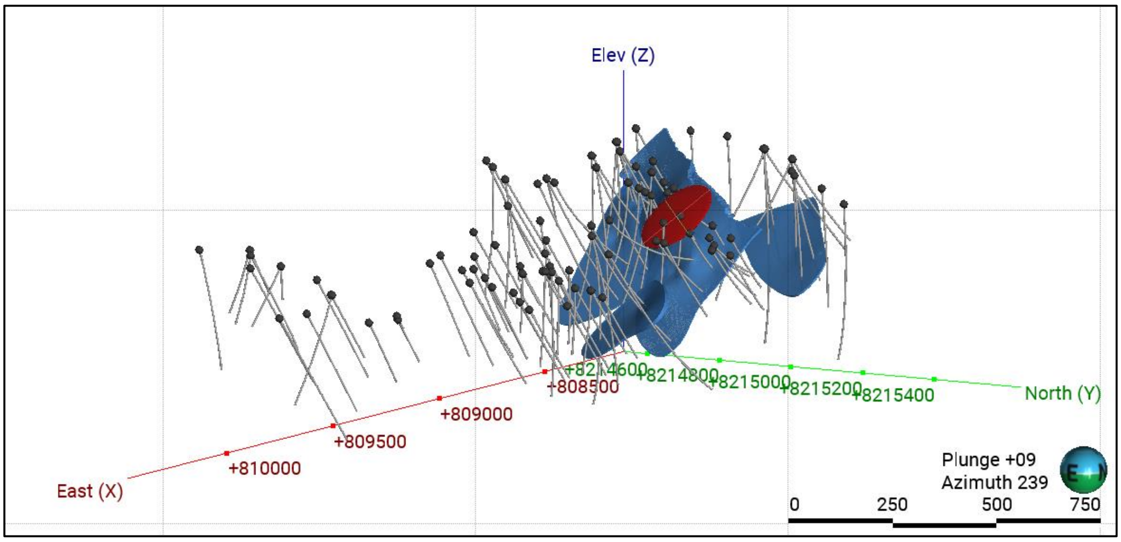

Figure 14-13: Variographic Ellipsoid – Oeste.

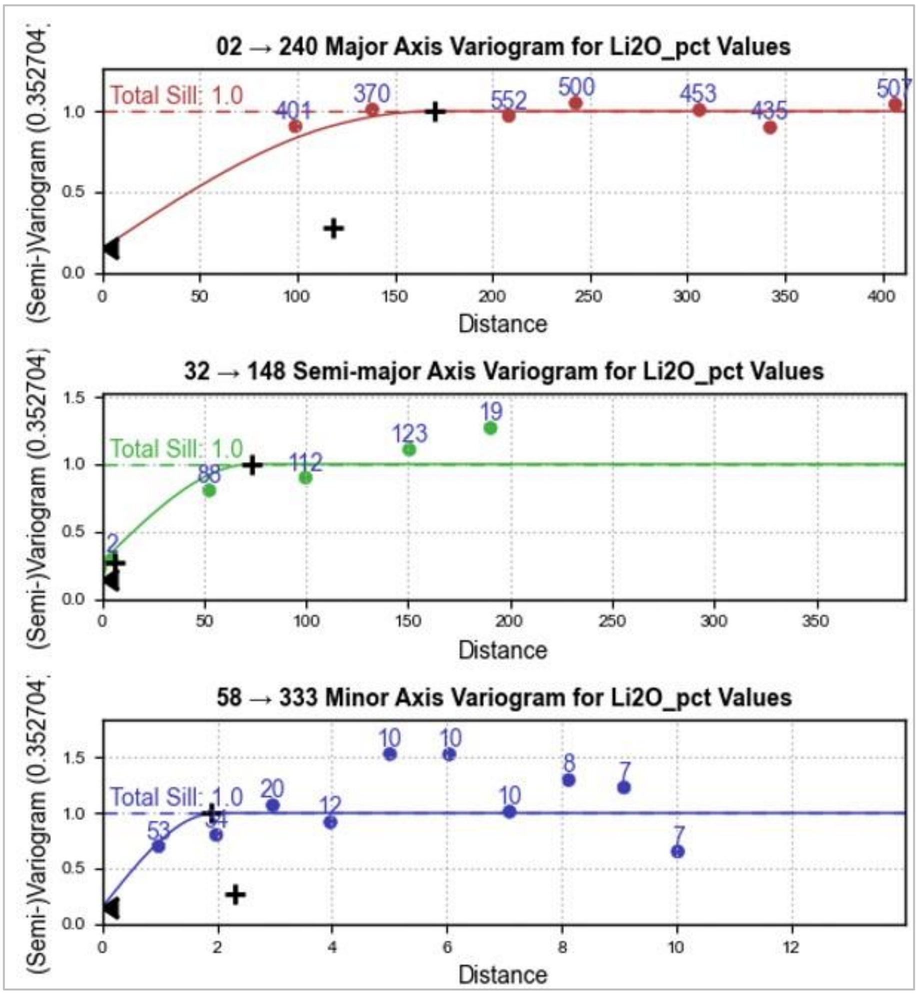

Figure 14-14: Variographic Model – Sobradinho.

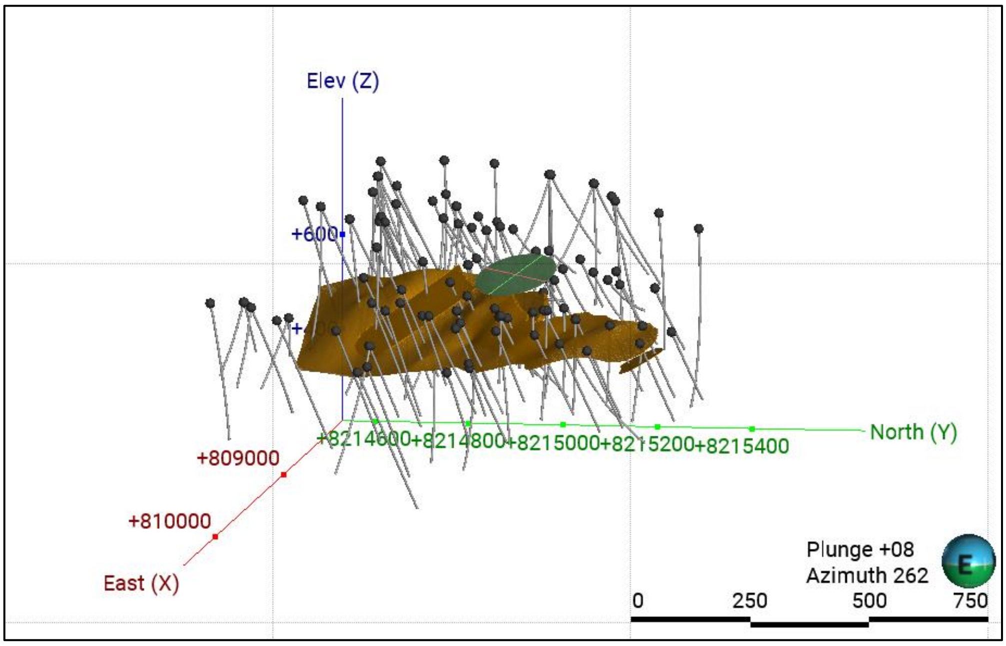

Figure 14-15: Variographic Ellipsoid – Sobradinho.

14.4 Block Model

A block model was built to carry out the grade estimation. The model's dimensions (16m x 16m x 4m) were defined based on the quarter of minimum drilling grid spacing. The sub-blocks model was set in 2m x 2m x 2m size to ensure the geometric adherence of the modelled bodies.

The dimensions of the block models and the attributes are shown in Table 14-3 and Table 14-4.

Table 14-3: Block Model Dimensions.

	X	Y	Z
Minimum Coordinates (m)	807965	8214389	-128
Maximum Coordinates (m)	810957	8216373	868
Number of nodes	188	125	250
Origin (Center) (m)	807965	8214389	-128
Origin (Corner) (m)	807957	8214381	-130
Block size (m)	16	16	4
Sub-Block	2	2	1
Azimuth: 320 degrees (rotate clockwise around the Z axis when looking down)			
Dip: 40 degrees (then rotate around the X' axis down from the horizontal plane)			
Pitch: 0 degrees (then rotate clockwise around the Z'' axis when looking down)			

Table 14-4: Block Model Variables Summary.

Attribute Name	Type	Deals	Background	Description
02.GM_GradeShell_BG	Character	-		Grade Shell Model
OREBODY	Character	-		Spodumene Veins Model
Class	Character	-		Mineral Classification
Density	Real	4	-99	Density Values
OXCOD	Character	-		Weathering Model Code
Li_2O	Real	4	-99	Li_2O OK estimation

14.5 Grade Estimation

The Li_2O grade estimate was carried out by Ordinary Kriging (OK) method using the Leapfrog Edge software, based on the structural analysis results described in this work. Density (%) variable was estimated by inverse of distance weighting applying the power parameter of two.

Each mineralized vein was estimated independently, in a hard boundary strategy, ensuring that samples from one domain did not influence neighboring domains. The variograms were initially modelled considering the structural continuity across the entire set of domains, followed by an adjustment for honoring the specific behavior for each domain. Table 14-5 shows the main parameters of the kriging strategy applied in the grade estimation.

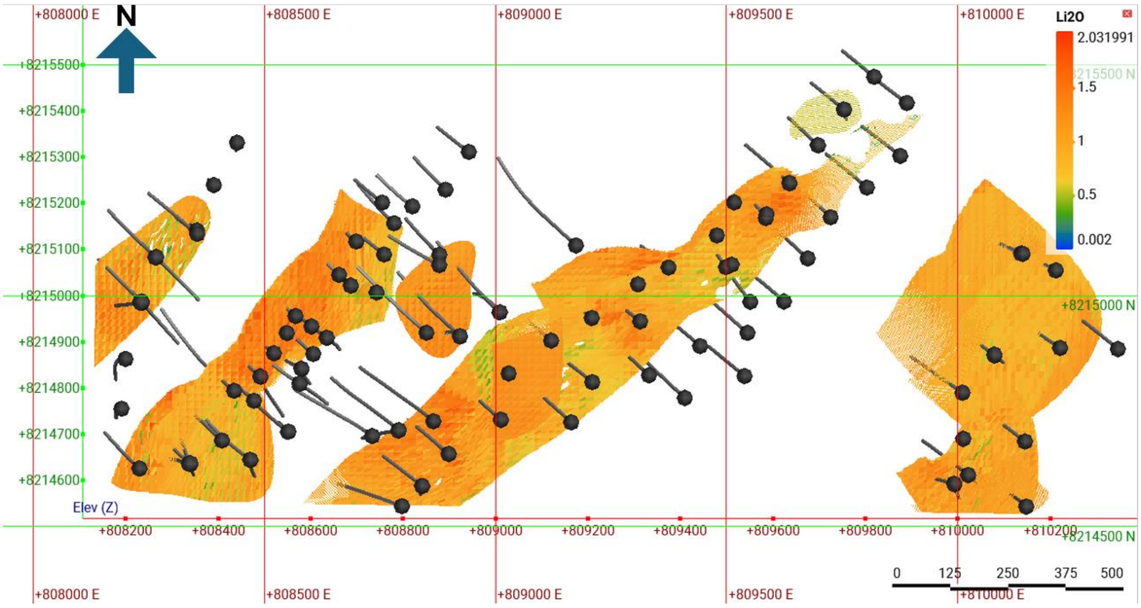

Figure 14-16: Estimated Li2O block model.

Table 14-5: Kriging Parameters.

Variable / Domain	Step of estimate	Ellipsoid Ranges			Number of Samples		
		Major	Semi-major	Minor	Minimum	Maximum	Max.by Drill Holes
Li2O - Cubo	Step 1	100	60	4	6	20	2
	Step 2	200	120	8	6	20	2
	Step 3	400	240	16	4	20	2
	Step 4	1600	960	64	4	20	2
Li2O - Oeste	Step 1	102	102	7.5	6	20	2
	Step 2	204	204	15	6	20	2
	Step 3	408	408	30	4	20	2
	Step 4	1600	1600	120	4	20	2
Li2O – Sobradinho	Step 1	170	73	1.9	6	20	2
	Step 2	340	146	4	6	20	2
	Step 3	680	292	8	4	20	2
	Step 4	1400	600	40	4	20	2
Density	Step 1	1000	1000	500	8	24	4
General Parameters: Dynamic variable orientation for estimation was applied to each domain in Leapfrog software. Moving neighbourhood from ellipsoid, Dip = 100° Dip Azimuth = 60° Pitch = 4° (Cubo) Moving neighbourhood from ellipsoid, Dip = 102° Dip Azimuth = 102° Pitch = 7.5° (Oeste) Moving neighbourhood from ellipsoid, Dip = 170° Dip Azimuth = 73° Pitch = 1.9° (Sobradinho)							

14.6 Estimation Validation

The QP carried out the validation of the estimate through visual verification and by the global and local bias verification using comparative methods based on Nearest Neighbour estimate.

NN-Checks plots were produced to validate the smoothing effect of the kriging estimate and the global bias.

Figure 14-17 and Figure 14-18 show the results for global bias analysis of the estimated Li2O and density variables. Results show expected smoothing effect of the grade estimation by Ordinary Kriging within the acceptance limits. The comparative analysis also show that Ordinary Kriging globally respects the average grades, and the global bias in the estimated grades is within the limits of acceptance.

Nearest Neighbour

Variable	Li2O
Class	Resource
N. of Samples	136790
Minimum	0.015
Maximum	3.673
Average	0.98
Variance	0.31
Std Deviation	0.56

Percentile

	Value
2.5%	0.154
5%	0.265
25%	0.53
Median	0.87
75%	1.317
95%	2.068
97.5%	2.239

Ordinary Kriging

Variable	Li2O
Class	Resource
N. of Samples	136790
Minimum	0.287
Maximum	2.137
Average	1.044
Variance	0.08
Std Deviation	0.29

Percentile

	Value
2.5%	0.521
5%	0.583
25%	0.838
Median	1.024
75%	1.254
95%	1.517
97.5%	1.601

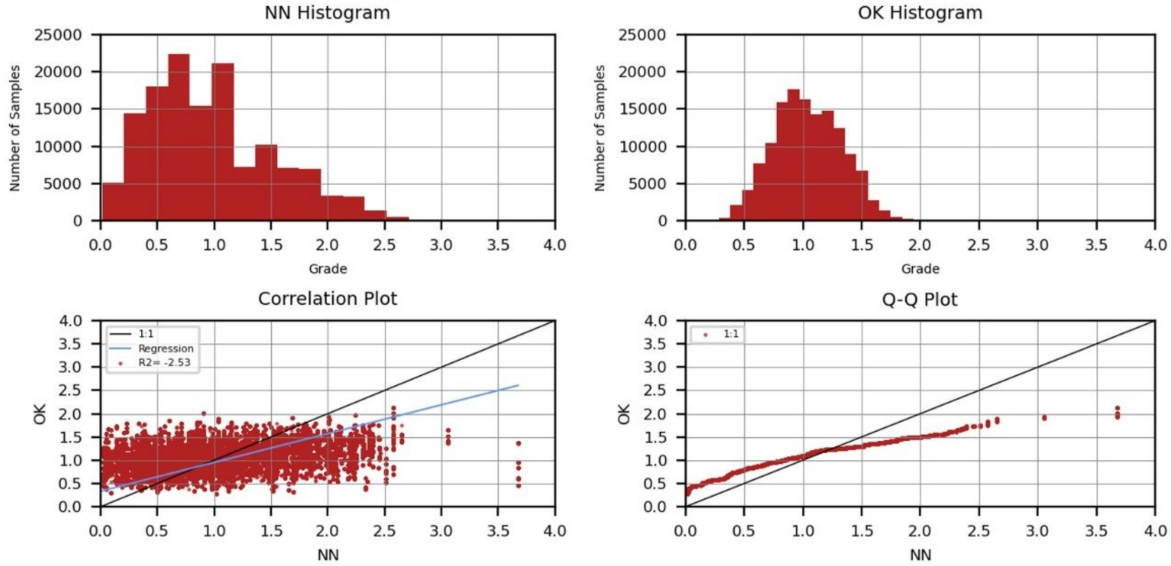

Figure 14-17: Estimation Validation - NN Check to Li2O.

Nearest Neighbour

Variable	Density
Class	Resource
N. of Samples	403107
Minimum	2.56
Maximum	2.93
Average	2.715
Variance	0.01
Std Deviation	0.08

Percentile

	Value
2.5%	2.6
5%	2.62
25%	2.65
Median	2.7
75%	2.76
95%	2.88
97.5%	2.89

Ordinary Kriging

Variable	Density
Class	Resource
N. of Samples	403107
Minimum	2.592
Maximum	2.847
Average	2.715
Variance	0.0
Std Deviation	0.03

Percentile

	Value
2.5%	2.656
5%	2.67
25%	2.698
Median	2.714
75%	2.73
95%	2.763
97.5%	2.775

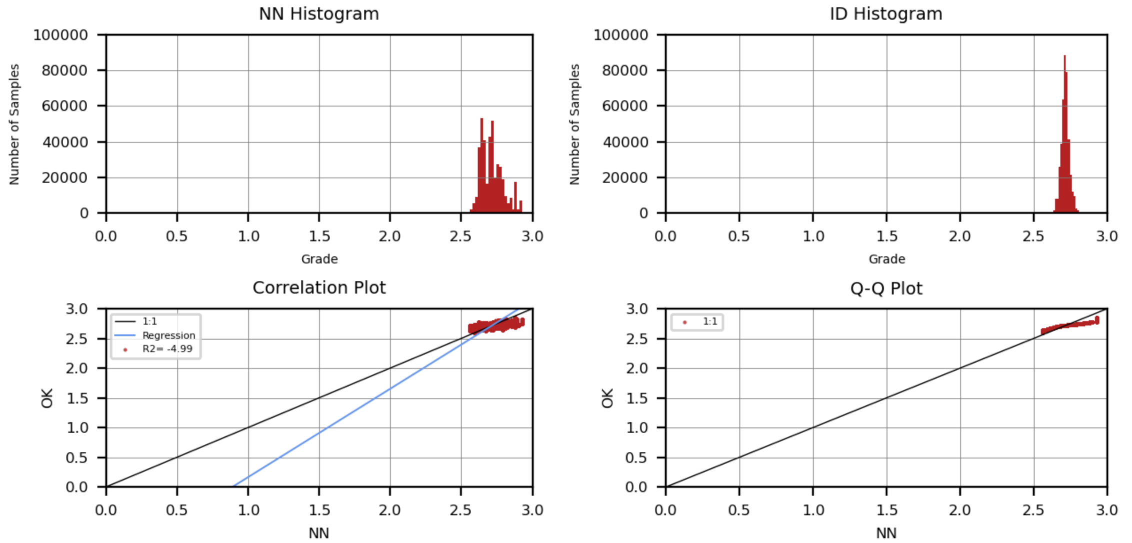

Figure 14-18: Estimation Validation - NN Check to Density.

The local bias assessment by the Swath-Plot method aims to analyze the occurrence of local bias and smoothing effect by comparing the average grades for the model through Ordinary Kriging and the Nearest Neighbour method in swath coordinates intervals graphs along the X, Y, and Z axes. Figure 14-19 and Figure 14-20 show the validation results of the Li_2O% and Density swath plots.

The results from the swath plots show that the smoothing effect or local and global bias are inside acceptance limits for the Mineral Resource estimate purposes.

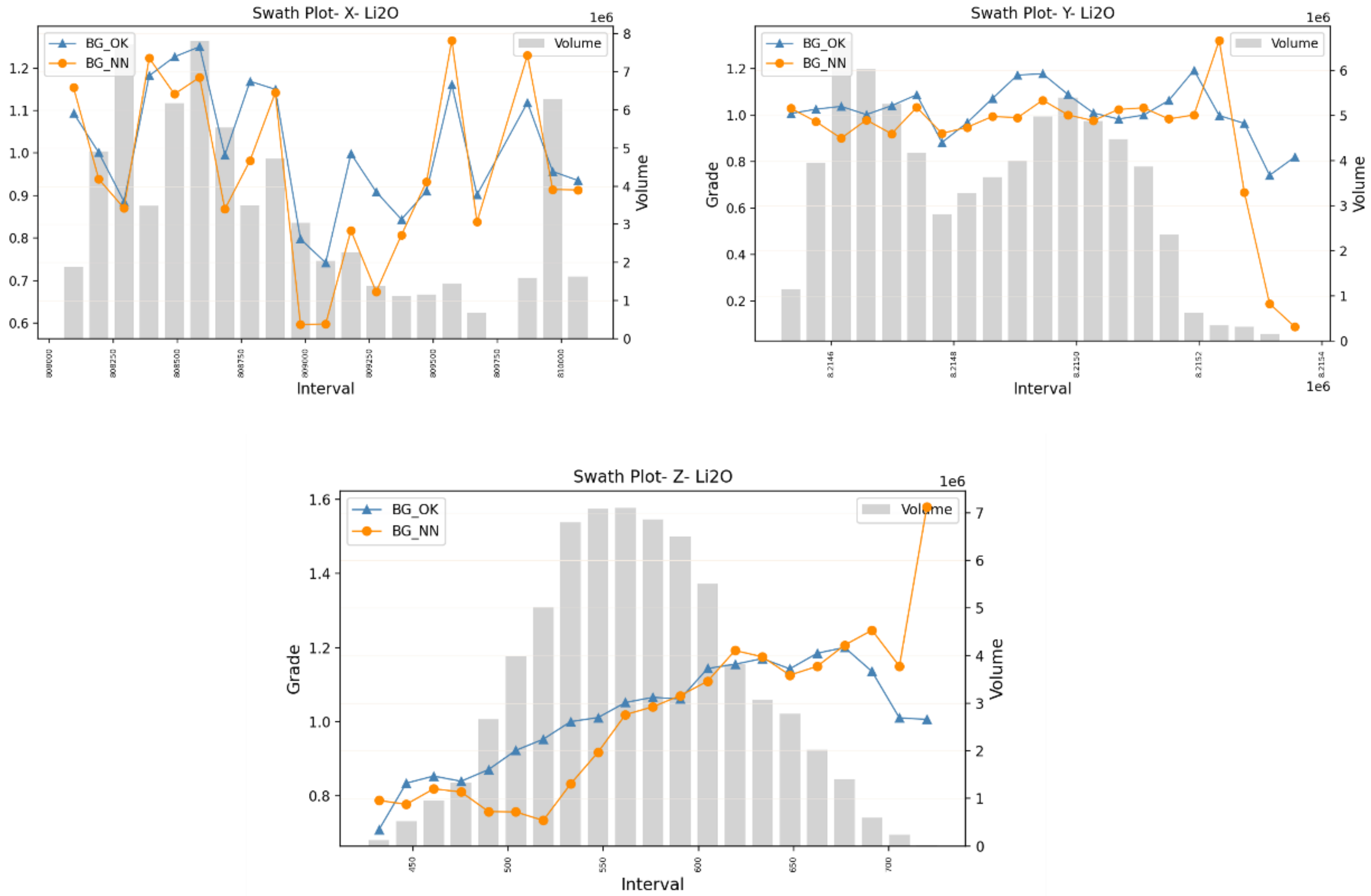

Figure 14-19: Estimation Validation for measured and indicated classified blocks – Swath Plot - Li2O.

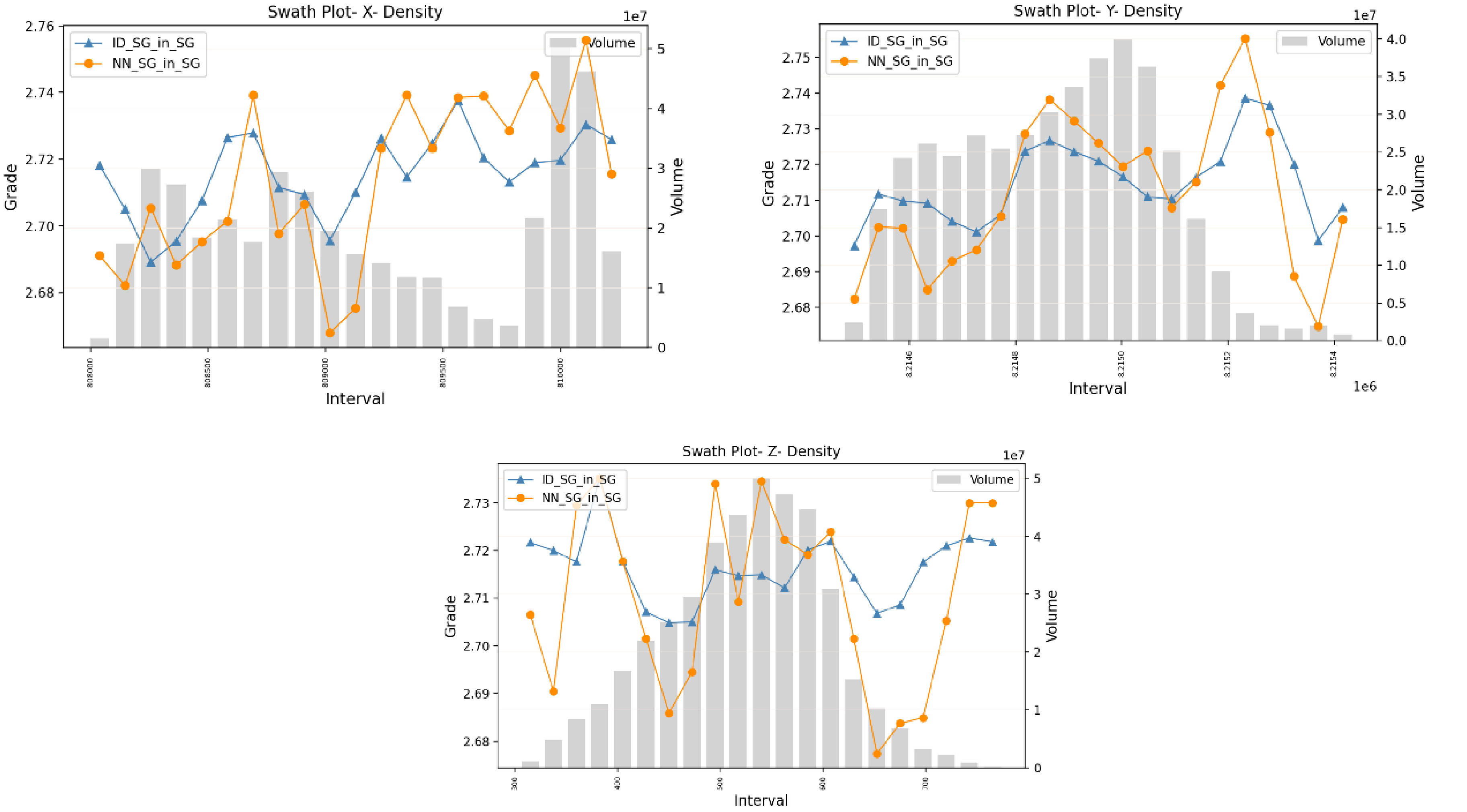

Figure 14-20: Estimation Validation – Swath Plot - Density.

14.7 Density

The density in the spodumene pegmatites was estimated by Inverse of distance. The schists density was defined as the mean of the 2297 samples from the Lithium Ionic database. The weathered zone does not have measurements, and GE21 has adopted the value 1.8g/cm³ for this domain, a common value used by other companies in the Jequitinhonha Valley region. GE21 recommends that additional density tests be carried out in weathered zones.

Table 14-6 shows the densities of estimated domains and the adopted densities of the host rocks.

Table 14-6: Density Values.

Domains	Density g/cm³
Shists Rocks	2.80
Weathered Zone	1.80
Spodumene Pegmatites	Estimated by IDW individually by target

14.8 Mineral Resources Classification

The Mineral Resource was classified based on CIM Standards and CIM Guidelines, utilizing geostatistical and classical methods, along with economically and mining-appropriate parameters relevant to the deposit type.

The classification boundaries made by GE21 for the Measured, Indicated, and Inferred categories were established through an approach that considered a comprehensive set of factors.

These factors included the adequacy of geological interpretation, sampling procedure and chemical analysis, the sample grid spacing, the survey methodology, and the quality of assay data.

Additionally, drilling spacing and the progressive expansion of the search radius during grade estimation stages were also considered, as well as the average anisotropic distance of the samples and the continuity of mineralization zones and de estimated grades.

This multi-faceted approach ensured the robustness and accuracy of the classification process.

The definition of mineral resource class was carried out applying following rules:

- The Measured Mineral Resource classification had as a reference the 50 meters of the average Euclidean distance to sample used in ordinary kriging estimation with a minimum of five composites in at least three different drill holes.
- The Indicated Mineral Resource classification had as a reference the 100 meters of the average Euclidean distance to sample used in ordinary kriging with a minimum of five composites in at least three different drill holes.
- The Inferred Mineral Resource classification is all remaining estimated blocks.

- The total Mineral Resources were constrained within the boundaries of the Mining Rights and the RPEEE (Reasonable Prospect for Eventual Economic Extraction - RPEEE) process, which was divided into two stages: open pit and underground pit.

The resource classification was supported by a grade shell representing the underground mining appliance (Reasonable Prospect for Eventual Economic Extraction - RPEEE), performed through a restricted model which limits the blocks classified as resource generated from an economic and geometric function.

Resources are shown in the Table 14-7 and Table 14-8, Figure 14-21 and Figure 14-22.

Table 14-7: Open Pit Baixa Grande Mineral Resource Estimate.

Category	Resource (Mt)	Grade (% Li2O)	Contained LCE (kt)
Measured	0.94	1.22	28.360
Indicated	3.14	1.11	86.194
Measured + Indicated	**4.08**	**1.13**	**114.554**
Inferred	5.54	0.99	136.634

Notes related to the Mineral Resource Estimate:

13. The spodumene pegmatite domains were modeled using composites with Li2O grades greater than 0.3%
14. The mineral resource estimates were prepared in accordance with the CIM Standards, and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
15. Mineral Resources are not ore reserves and are not demonstrably economically recoverable.
16. Grades reported using dry density.
17. The effective date of the MRE was January 4, 2024.
18. The QP responsible for the Mineral Resources is geologist Leonardo Soares (MAIG #5180).
19. The MRE numbers provided have been rounded to the estimate relative precision. Values cannot be added due to rounding.
20. The MRE is delimited by Lithium Ionic Baixa Grande Target Claims (ANM).
21. The MRE was estimated using ordinary kriging in 16m x 16m x 4m blocks.
22. The MRE report table was produced in Leapfrog Geo software.
23. The reported MRE only contains fresh rock domains.
24. The MRE was restricted by a pit shell using a selling price of 2750 US$/t Conc., Mining cost of 2.50 US$/ton mined, processing cost of 12.50 US$/ ton ROM and a selling cost of 112.56 US$/t conc.

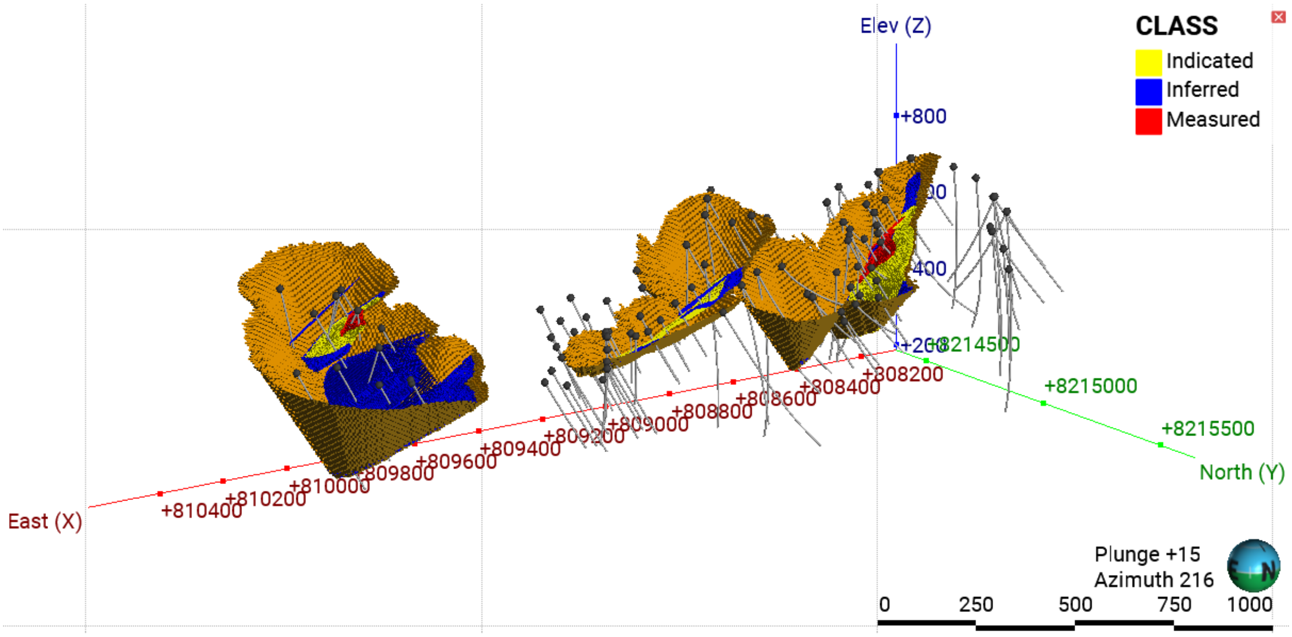

Figure 14-21: Open pit optimization with RPEEE.

Table 14-8: Underground Pit Baixa Grande Mineral Resource Estimates

Category	Resource (Mt)	Grade (% Li2O)	Contained LCE (t)
Measured	0.17	0.93	3.910
Indicated	1.61	1.01	40.213
Measured + Indicated	1.78	1.00	44.123
Inferred	3.36	0.95	78.938

Notes related to the Mineral Resource Estimate:

1. The spodumene pegmatite domains were modeled using composites with Li2O grades greater than 0.3%
2. The mineral resource estimates were prepared in accordance with the CIM Standards, and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
3. Mineral Resources are not ore reserves and are not demonstrably economically recoverable.
4. Grades reported using dry density.
5. The effective date of the MRE was January 4 2024.
6. The QP responsible for the Mineral Resources is geologist Leonardo Soares (MAIG #5180).
7. The MRE numbers provided have been rounded to the estimate relative precision. Values cannot be added due to rounding.
8. The MRE is delimited by Lithium Ionic Baixa Grande Target Claims (ANM).
9. The MRE was estimated using ordinary kriging in 16m x 16m x 4m blocks.
10. The MRE report table was produced in Leapfrog Geo software.
11. The reported MRE only contains fresh rock domains.
12. The MRE was restricted by interpreting suitable-grade shells using a 0.5% Li2O cut-off for underground resources.

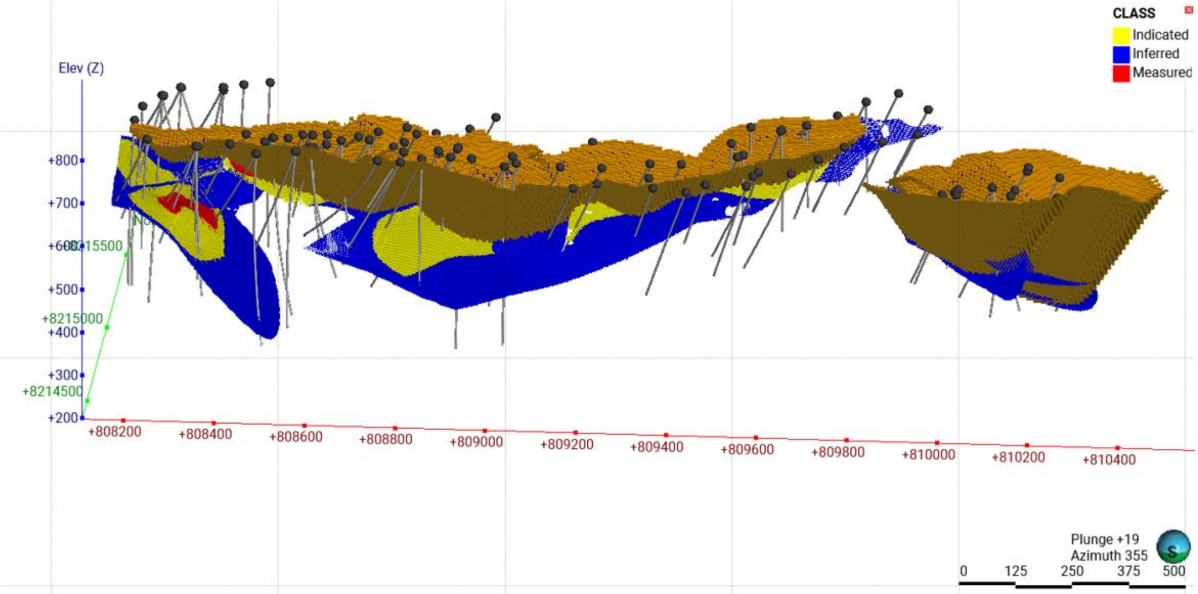

Figure 14-22: Underground Optimization with RPEEE.

15 MINERAL RESERVES ESTIMATES

Not applicable.

16 MINING METHODS

Not applicable.

17 RECOVERY METHODS

Not applicable.

18 PROJECT INFRASTRUCTURE

Not applicable.

19 MARKET STUDIES AND CONTRACTS

Not applicable.

20 ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS

Not applicable.

21 CAPITAL AND OPERATING COSTS

Not applicable.

22 ECONOMIC ANALYSIS

Not applicable.

23 ADJACENT PROPERTIES

The Araçuaí Pegmatitic District, situated in the northeastern sector of Brazil's Eastern Pegmatitic Province, encompasses the region bounded by Salinas, Araçuaí, and Capelinha to the west, and Itinga and Caraí to the east. In this district, Brazil's is a lithium producer, including lithium-bearing pegmatites, gemological pegmatites, and pegmatites that produce ceramic minerals and ornamental rocks. Many of these have been exploited by mineral exploration and mining companies, as well as by artisanal miners, for over a century.

The lithium-bearing pegmatites in the Araçuaí Pegmatitic District include complex zoned bodies with highly diverse mineralogy type, as well as simply to complexly zoned pegmatites rich in disseminated spodumene within a quartz-feldspar matrix that is rich in albite and relatively poor in accessory minerals. Current lithium exploration focuses on spodumene, which typically makes up deposits that can exhibit ore mass volumes of 5 to 30 million tons, with economic grades of lithium oxide.

The Araçuaí Pegmatitic District, particularly the Itinga Pegmatitic Field, is of extreme importance for prospecting projects, considering its production history and its geological and metallogenetic characteristics in this district, in terms of history and prospects for spodumene production, are the Brazilian Lithium Company (CBL) and the Sigma Lithium Corporation (successor to Arqueana de Minérios e Metais Ltda).

The Baixa Grande lithium ore deposit, registered under ANM 832439/2009, is located adjacent to the mineralized areas of spodumene-bearing pegmatites, which include the Cachoeira deposits of the Companhia Brasileira de Lítio (CBL) and the Barreiro, Murial, and Lavra do Meio deposits of Sigma Lithium Corporation.

Figure 23-1 shows the locations of the mineral rights of CBL and Sigma Lithium surrounding the mining right 832.439/2009.

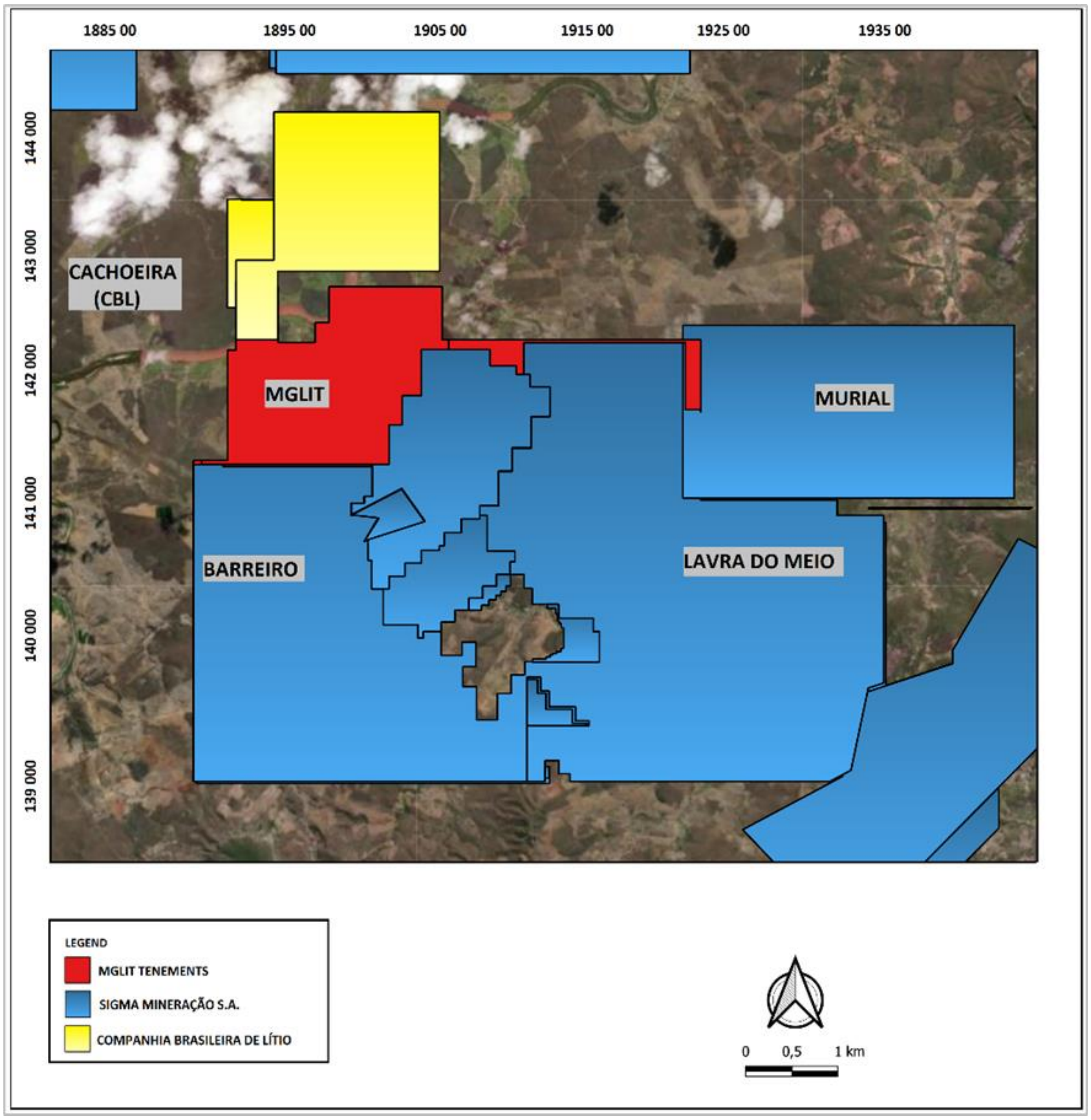

Figure 23-1 Mining Right MGLIT 832.439/2009 (in red) and in the Surrounding Areas CBL and Sigma.

24 OTHER RELEVANT DATA AND INFORMATION

There is no relevant information which affect the opinions offered in this Report.

25 INTERPRETATION AND CONCLUSIONS

25.1 Geology and Mineral Resources

Mineral Resources were estimated and limited to the areas outlined using the Mining Rights polygonal that comprise the Baixa Grande Property and the Reasonable Prospect for Eventual Economic Extraction - RPEEE.

The Baixa Grande database contains 3276 diamond drillhole assay intervals covering 3055.47 meters

A set of solid grade shells for estimation domains was created using a 0.3% Li_2O (%) threshold. These interpretations were then transformed into a series of implicit 3D models, aligned between 116º and 151º strike directions. Additionally, weathering modeling was performed, taking into account the information provided in the logs. The model was built from implicit modelling using the Leapfrog 2023 software.

The Ordinary Kriging (OK) estimation method was applied to the Li_2O% variable, while the Inverse Distance (ID) method was utilized for the Density variable, both based on the outcomes of a structural analysis.

The mathematical/geostatistical criterion for classifying the resource was based on:

- The Measured Mineral Resource classification had as a reference the 50 meters of the Average Euclidean distance to sample (AvgD) used in ordinary kriging estimation with a minimum of five composites in at least three different drill holes.
- The Indicated Mineral Resource classification had as a reference the 100 meters of the Average Euclidean distance to sample (AvgD) used in ordinary kriging with a minimum of five composites in at least three different drill holes.
- The Inferred Mineral Resource classification is all remaining estimated blocks.
- The total Mineral Resources were constrained within the boundaries of the Mining Rights and the RPEEE pit, which was divided into two stages: open pit and underground pit.

The Baixa Grande Mineral Resources are summarized in Table 25-1 and in Table 25-2

Table 25-1: Open Pit Baixa Grande Mineral Resource Estimates

Category	Resource (Mt)	Grade (% Li2O)	Contained LCE (kt)
Measured	0.94	1.22	28.360
Indicated	3.14	1.11	86.194
Measured + Indicated	**4.08**	**1.13**	**114.554**
Inferred	5.54	0.99	136.634

Notes related to the Mineral Resource Estimate:

1. The spodumene pegmatite domains were modeled using composites with Li2O grades greater than 0.3%
2. The mineral resource estimates were prepared in accordance with the CIM Standards, and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
3. Mineral Resources are not ore reserves and are not demonstrably economically recoverable.
4. Grades reported using dry density.
5. The effective date of the MRE was January 4, 2024.
6. The QP responsible for the Mineral Resources is geologist Leonardo Soares (MAIG #5180).
7. The MRE numbers provided have been rounded to the estimate relative precision. Values cannot be added due to rounding.
8. The MRE is delimited by Lithium Ionic Baixa Grande Target Claims (ANM).
9. The MRE was estimated using ordinary kriging in 16m x 16m x 4m blocks.
10. The MRE report table was produced in Leapfrog Geo software.
11. The reported MRE only contains fresh rock domains.
12. The MRE was restricted by a pit shell using a selling price of 2750 US$/t Conc., Mining cost of 2.50 US$/ton mined, processing cost of 12.50 US$/ ton ROM and a selling cost of 112.56 US$/t conc.

Table 25-2: Underground Pit Baixa Grande Mineral Resource Estimates

Category	Resource (Mt)	Grade (% Li2O)	Contained LCE (t)
Measured	0.17	0.93	3.910
Indicated	1.61	1.01	40.213
Measured + Indicated	1.78	1.00	44.123
Inferred	3.36	0.95	78.938

Notes related to the Mineral Resource Estimate:

1. The spodumene pegmatite domains were modeled using composites with Li_2O grades greater than 0.3%.
2. The Mineral Resource Estimates were prepared in accordance with the CIM Standards, and the CIM Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to the deposit.
3. Mineral Resources are not Ore Reserves and are not demonstrably economically recoverable.
4. Grades reported using Dry Density.
5. The effective date of the MRE was January 4, 2024.
6. The QP responsible for the Mineral Resources is geologist Leonardo Soares (MAIG #5180).
7. The MRE numbers provided have been rounded to the estimate relative precision. Values cannot be added due to rounding.
8. The MRE is delimited by Lithium Ionic Baixa Grande Target Claims (ANM).
9. The MRE was estimated using ordinary kriging in 16m x 16m x 4m blocks.
10. The MRE Report Table was produced in Leapfrog Geo software.
11. The reported MRE only contains Fresh Rock Domains.
12. The MRE was restricted by interpreting suitable-grade shells using a 0.5% Li_2O cut-off for underground resources.

26 RECOMMENDATIONS

The primary recommendation is to continue the development of the Project through additional detailed investigations and higher confidence engineering studies. The aim being to complete a higher confidence engineering study as the next major project milestone.

The following recommendations are made with respect to future work on the Property. This work will be required for upgrading Baixa Grande's Resources to Indicated and Measured category, and to advance next stage detailed engineering and economic studies. These are listed as separate phases, as increasing the confidence of the Resources to Indicated or Measured category will be required prior to economic studies.

26.1 Work Required to Increase Confidence in the Resource

26.1.1 Geology and Mineral Resource Estimate

GE21 proposes the following recommendations for the continuous improvement of the Mineral Resource estimate:

- A 50x50m infill drilling program in domain of the indicate resource classification where will focus on resource delineation improvement.
- A 100x100m infill drilling program in domain of the inferred resource classification where will focus on resource delineation improvement.
- A density campaign to measure the density of drill holes cores by drying the samples in an oven, as well as waterproofing them. Compare the results with the methodology used in the current project procedure to check whether there is a bias in the results.
- Conduct an on-site density survey in the weathered zone.
- An updated mineral resource assessment is also recommended through an infill drilling program.

The Table 26-1 present the estimate a budget for the implementation of the recommendations.

Table 26-1 Planned Budget recommendations.

Recommended work		Estimated cost (US$)
Additional work to upgrade to Indicated and Measured category	A 50x50m infill drilling program	~$50,000
	A 100x100m infill drilling program in domain of the inferred resource classification	~$3,000,000
	A density campaign	~$15,000
	On-site density survey	~$15,000
	Updated mineral resources	~$60,000
	Total estimated costs	$3,140,000

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APPENDIX A

Technical Report QP Certificates

QP CERTIFICATE OF LEONARDO DE MORAES SOARES

a) I, Leonardo de Moraes Soares, am a Geologist for GE21 Consultoria Mineral, located at Avenida Afonso Pena, 3130 – 12º andar, Belo Horizonte, MG, Brazil, CEP 30.130-910.

b) This certificate applies to the Technical Report entitled "Independent Technical Report on Mineral Resources Estimate for the Baixa Grande - Salinas Lithium Project, Minas Gerais State, Brazil" with an effective date of January 4, 2024.

c) I hold the following academic qualifications: a B.A.Sc. in Geology from the Federal University of Minas Gerais, in Belo Horizonte, Brazil.

d) I am a professional Geologist, with more than 22 years of experience in the mining industry. My relevant experience for the purpose of this Technical Report includes:

- I have 9 years of experience as a specialist geologist on exploration, geotechnics and grade control on mining companies on Brazil.
- 13 years of experience in consultancy companies as specialist for several commodities, including Lithium projects in resource estimate and geostatistics.

e) I am a member of the Australian Institute of Geoscientists (#5180).

f) I meet all the education, work experience, and professional registration requirements of a "Qualified Person" as defined in Section 1.1 of National Instrument 43-101.

g) I inspected between 13th to 14th of September 2023 the property that is the subject of this Technical Report.

h) I am responsible for Section 1 to 12, 14 and partial responsibility on 25 to 27 of this Technical Report.

i) I am independent of the Issuer, Lithium Ionic Corp.

j) I have no prior involvement with the property that is the subject of the technical report.

k) I have read National Instrument 43-101 and the parts of the Technical Report for which I am responsible have been prepared in compliance with this Instrument, including the CIM Definition Standards on Mineral Resources and Mineral Reserves.

l) At the effective date of the Technical Report, and at the date, it was filed, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Original document signed and sealed.

Leonardo de Moraes Soares

Belo Horizonte, Brazil, on May 17, 2024.

QP CERTIFICATE OF PAULO BERGMAN

a) I, Paulo Bergman, am a Mining Engineer associated to GE21 Consultoria Mineral, located at Avenida Afonso Pena, 3130 − 12º andar, Belo Horizonte, MG, Brazil, CEP 30.130-910.

b) This certificate applies to the Technical Report entitled "Independent Technical Report on Mineral Resources Estimate for the Baixa Grande - Salinas Lithium Project, Minas Gerais State, Brazil" with an effective date of January 4, 2024.

c) I hold the following academic qualifications: a B.A.Sc. in Mining Engineering from the Federal University of Minas Gerais, in Belo Horizonte, Minas Gerais, Brazil.

d) I am a professional Mining Engineer, with more than 40 years of experience in the mining industry. My relevant experience for the purpose of this Technical Report includes:

  - 30 years in mining and plant operation management, including AngloGold, Yamana, Jaguar Mining and Buritirama Mineração.
  - 10 years as engineering development and consultancy in the mining industry, including gold, iron, manganese, rare earth elements and others.

e) I am a Member of the Australasian Institute of Mining and Metallurgy (#333121).

f) I meet all the education, work experience, and professional registration requirements of a "Qualified Person" as defined in Section 1.1 of National Instrument 43-101.

g) I am responsible for section 13 and partial responsibility on 25 to 27 of this Technical Report.

h) I am independent of the Issuer, Lithium Ionic Corp.

i) I have no prior involvement with the property that is the subject of the technical report.

j) I have read National Instrument 43-101 and the parts of the Technical Report for which I am responsible have been prepared in compliance with this Instrument, including the CIM Definition Standards on Mineral Resources and Mineral Reserves.

k) At the effective date of the Technical Report, and at the date it was filed, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Original document signed and sealed.

Paulo Bergman.

Belo Horizonte, Brazil, on May 17, 2024.