

Strong Lithium Drill Targets Defined for Q1 2025 in Brazil

ASX Announcement
17th December 2024

Lightning Minerals (L1M or the Company) is pleased to announce up to a planned 3,500m of diamond drilling at various drill targets across the company's projects in the prolific Lithium Valley region of Minas Gerais, Brazil. Drilling is scheduled to begin in Q1 2025, commencing at the Esperança project where lithium bearing pegmatites have recently been discovered with spodumene grading up to 4.04% Li₂O (ASX Announcement 18 November 2024).

Drilling is then planned to move to the nearby Caraíbas project where elevated assays of up to 239ppm lithium have been returned for a lithium in soil anomaly that extends for approximately 2km and is up to 700m in width. Other target areas are under consideration for drill testing at the Company's Canabrava project where strong lithium in soil anomalism up to 113ppm lithium within a north-west to south-east trend has also been identified (ASX Announcement 03 October 2024). Strong geophysical signatures are also being utilised to support drill targeting following a positive geophysical interpretation that supports the prospectivity of the region (ASX Announcement 21 November 2024).

Drill planning is ongoing following a recent site visit to Brazil by Managing Director Alex Biggs with plans to begin in Q1 2025.

HIGHLIGHTS

- **DRILL TARGET 1: Up to 2,000m Diamond Drilling at the Esperança project testing lithium bearing spodumene pegmatites grading up to 4.04% Li₂O (LIBS)**
- **DRILL TARGET 2: Up to 1,500m Diamond Drilling at the Caraíbas project targeting ~2km x 700m lithium soil anomalism, and a smaller 800m x 300m anomaly with peak assay result of 239ppm lithium**
- **DRILL TARGET 3: Canabrava project targeting lithium in soil anomalism up to 113ppm. Infill soil sampling results pending to define north-west to south-east trend and potential starting point for drilling**
- **Ongoing ground reconnaissance and pending infill soil assays to provide additional drill targeting beyond initial planned drill meters**

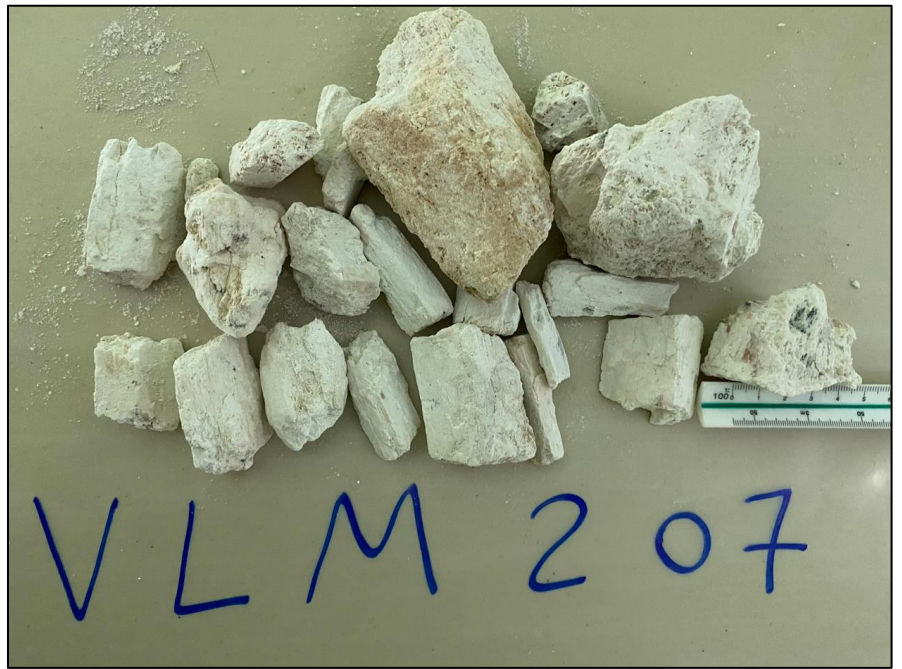
Lightning Minerals Managing Director Alex Biggs said, "The last 6-months have proven to be very successful for our phase 1 exploration program in Brazil. At the beginning of our work programs, we developed a clear and focused strategy which we have executed quickly, cost effectively and safely. The results are significant in this context and now provide the Company with excellent drill targets and positions us to potentially make a discovery in the Lithium Valley. We have always been strong believers in the lithium thematic and the potential that Brazil presents to be a significant contributor to the lithium supply chain. Recent acquisition activity in the region supports this and we feel there are other significant lithium discoveries to be made in the region. As we finish 2024, we are gearing up for a very busy and productive start to the new year. I would like to thank our team for the diligence, hard work and commitment they have shown as we look forward to continued success".

Drill Target 1: Esperança Project - Lithium Pegmatite Discovery up to 4.04% Li₂O (Up to an Initial 2,000m)

The Esperança project is the Company's priority drill target after spodumene was discovered in shallowly dipping pegmatites in the northwest corner of the tenement (Figure 1 and ASX Announcement 18 November 2024). The drill strategy at Esperança includes up to 2,000m of diamond drilling. Diamond drilling is the most effective drilling technique in the region and will return the highest quality samples for laboratory testing. The program will utilise small 'man portable' diamond drilling rigs from local drilling contractors. This strategy facilitates easier access and optionality around initial drill targeting.

Approximately 1,500m of the drilling allocation will be designed to intersect and extend the spodumene discovery at the site of the historical artisanal workings (Figure 1). The remaining allocation of 500m drill metres will be used to test beneath the outcropping spodumene zone to ascertain if the pegmatite is part of a larger swarm of stacked pegmatites with similar shallowly dipping orientations and geochemistry. If the phase 1 drill program intersects mineralised pegmatites, an extended program expanding the drill footprint will be initiated to continue exploration works.

Figure 1a (left): Spodumene rich pegmatite discovered at the Esperança Property. Figure 1b (right): Spodumene crystals collected from artisanal workings within the Esperança project (ASX Announcement 18 November 2024)

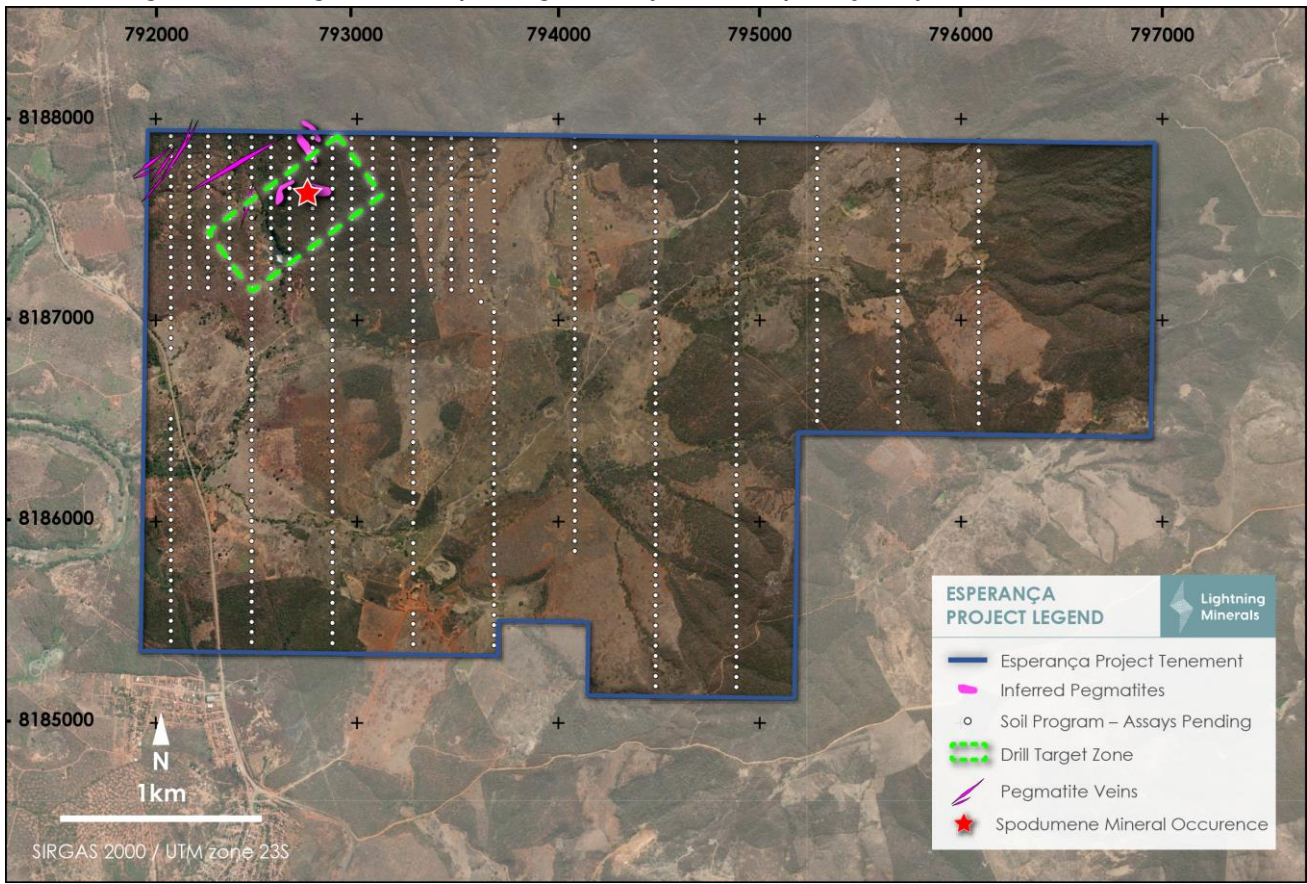


An infill soil sampling program was conducted around the site of the spodumene discovery to support further drill targeting which is now complete. This infill sampling has been submitted to the SGS laboratory in Belo Horizonte with results pending. Additional drill targets may be generated from these results should they show similar strong geochemical markers.

The approximate location of the phase 1 drill program, and the pending soil assays are shown in Figure 2. A ground reconnaissance campaign is also underway directly around the spodumene discovery site to identify further pegmatites, gain an understanding of possible orientation of outcropping lithologies and develop a strategy for further drilling beyond the initial planned 2,000m.

For personal use only

Figure 2: Drill target area and pending soil assays for the Esperança Project, Minas Gerais, Brazil



For personal use only

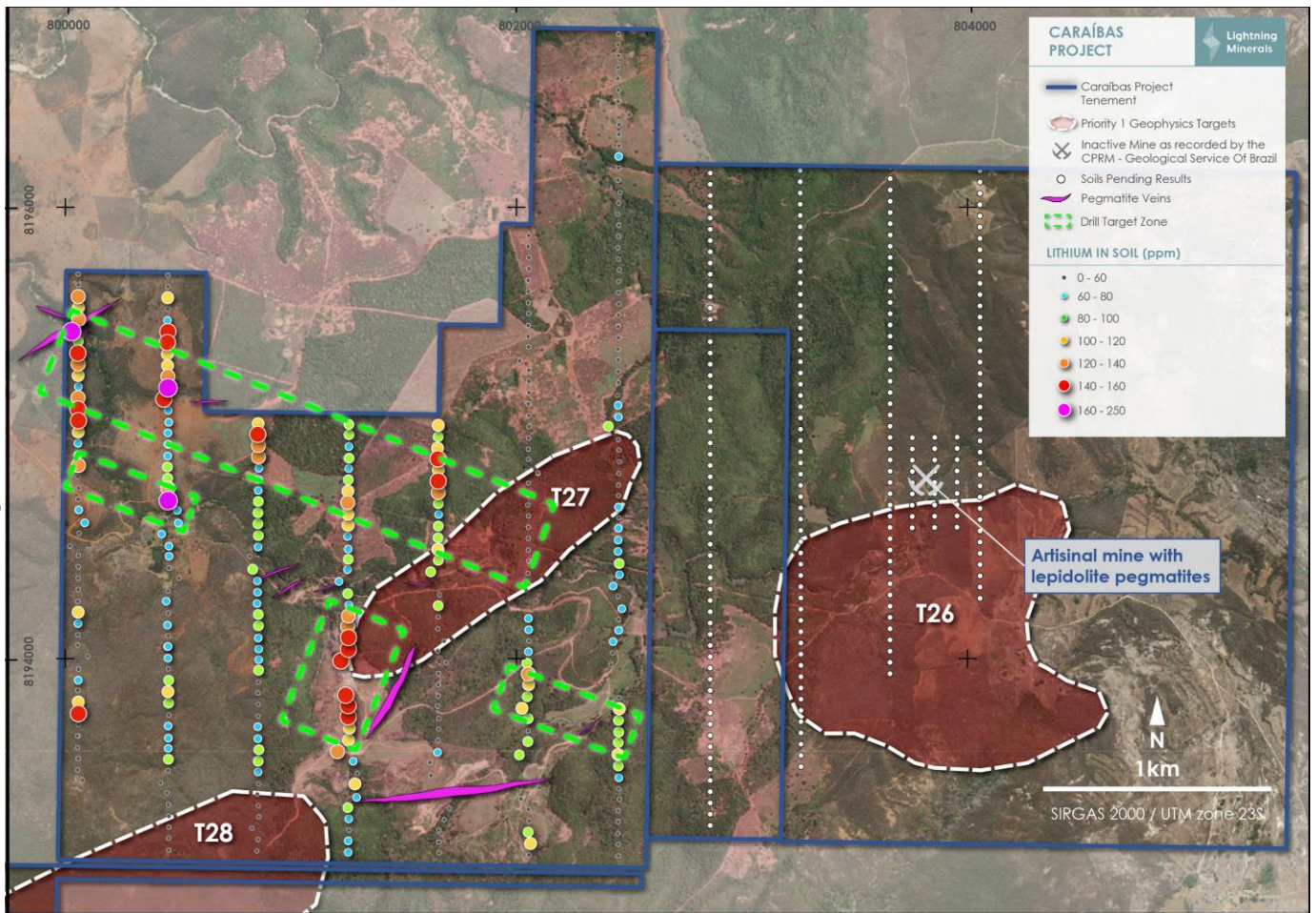
Drill Target 2: ~2km Lithium Trend at Caraíbas Project with up to 239ppm Lithium (Up to Initial 1,500m)

The Caraíbas project represents the Company's second priority drill target in Brazil. After recent field investigations, four target drilling areas are being considered for phase 1 drill testing as shown in Figure 3. Field teams remain active and continue to refine the targets by mapping pegmatite outcrops in the region and recording geological orientations to confirm final collar locations in these target zones.

The main target zone has returned elevated lithium in soil anomalism with results highlighting a zone approximately 2km long and 700m wide. The peak result of up to 239ppm lithium is considered a strong response for the region and increases confidence in drill targeting at this location. Several diamond drill holes will be completed along the 2km anomaly to determine both trend extent and test the thesis of potential stacked lithium bearing pegmatites at depth.

The remaining three priority targets include an ~800m x 300m lithium in soil anomaly which remains open to the south-east, a ~450m long zone of elevated results over 120ppm lithium, and a ~600m anomaly parallel to the main target zone (Figure 3).

Figure 3: Drill target areas, soil results, and pending soil assays for the Caraibas Project, Minas Gerais, Brazil



For personal use only

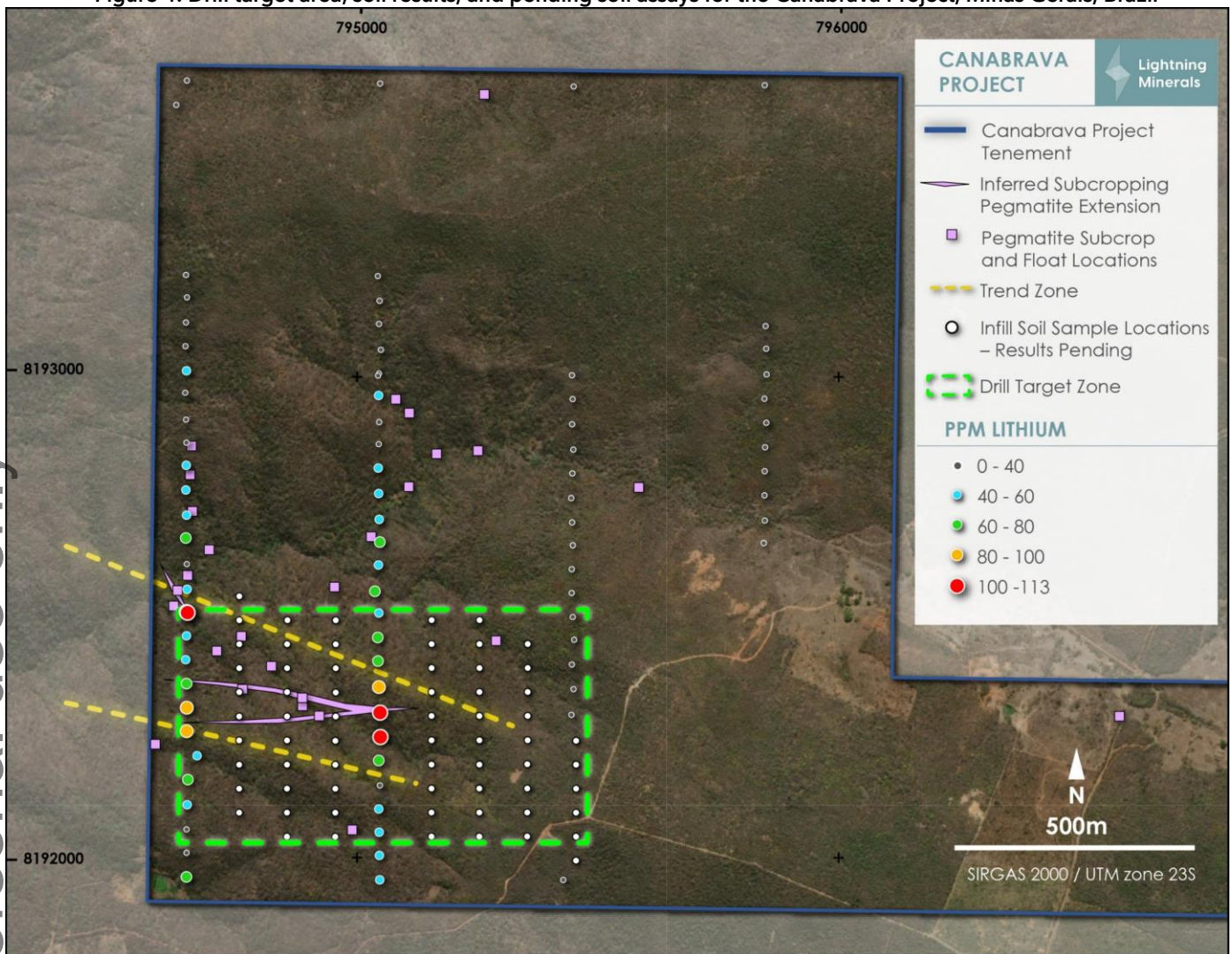
The recently completed soil program that covers the eastern portion of the tenement and the previously identified historical artisanal workings (ASX Announcement 22 April 2024) have laboratory assays pending. Additional drill targets may materialise from these results should they show similar geochemical markers for hard rock lithium targets.

Drill Target 3: Canabrava Lithium in Soil Anomaly up to 113ppm Lithium (Drill Meters TBC)

Drill targeting is ongoing at the Canabrava project with infill soil sampling now complete across the previously identified lithium in soil anomaly that returned assays up to 113ppm lithium (ASX Announcement 03 October 2024). Laboratory assay results for the infill sampling works are pending. While no drill meterage has yet been committed to the project it remains as a priority for the Company and will be further evaluated in early 2025.

Of particular interest here is whether the already identified anomalism continues to the east of that shown in Figure 4. The area is now part of a range of target areas being revisited during the December/January period to confirm potential collar locations for drilling.

Figure 4: Drill target area, soil results, and pending soil assays for the Canabrava Project, Minas Gerais, Brazil



For personal use only

Ongoing Works in Brazil - Preparations for Drilling

Phase 1 soil sampling is now complete across all areas at the Esperança, Caraíbas and Canabrava projects. Infill soil sampling has also been completed around the spodumene discovery at Esperança with results pending. These results will assist with further drill targeting beyond the initial planned 2,000m of diamond drilling.

Infill soil sampling results are pending for Canabrava around the elevated lithium in soil results up to 113ppm lithium (ASX Announcement 03 October 2024). Soil sampling results are also pending for the eastern area of the Canabrava project including infill sampling around the artisanal workings which were identified when the projects were acquired (ASX Announcement 22 April 2024).

Ground reconnaissance works are also continuing across all projects with further mapping of pegmatites underway to assist with drill targeting and increasing knowledge of the project areas. Caraíbas targets are scheduled to be drilled after drilling at the Esperança project has been completed.

A contractor engagement process is underway for appointment of a drilling contractor and appropriate support staff to support the Company's drilling plans in early 2025.

Figure 5: Lightning Minerals' Brazilian tenements in regional context of the Lithium Valley region of Minas Gerais

For personal use only

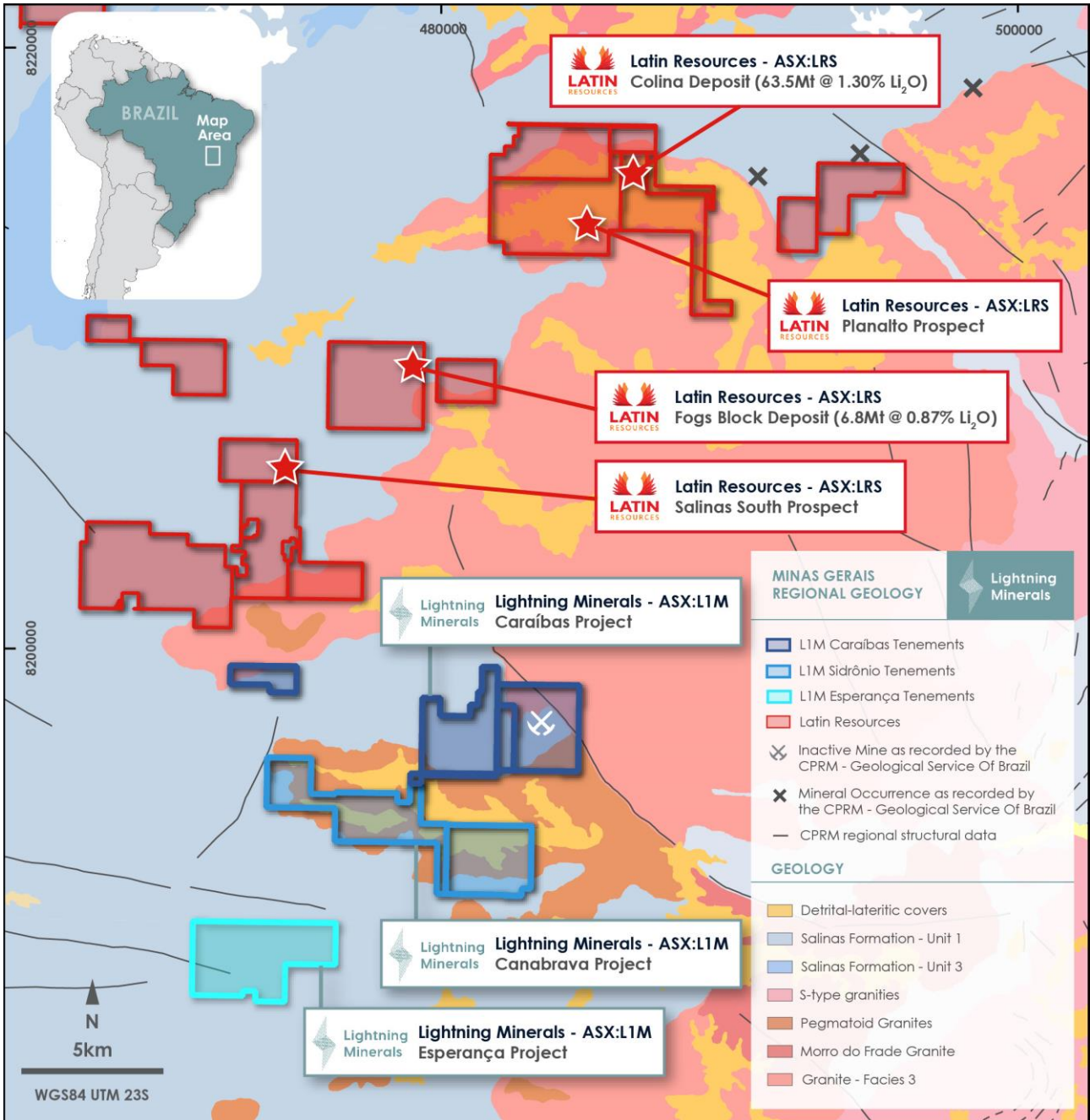
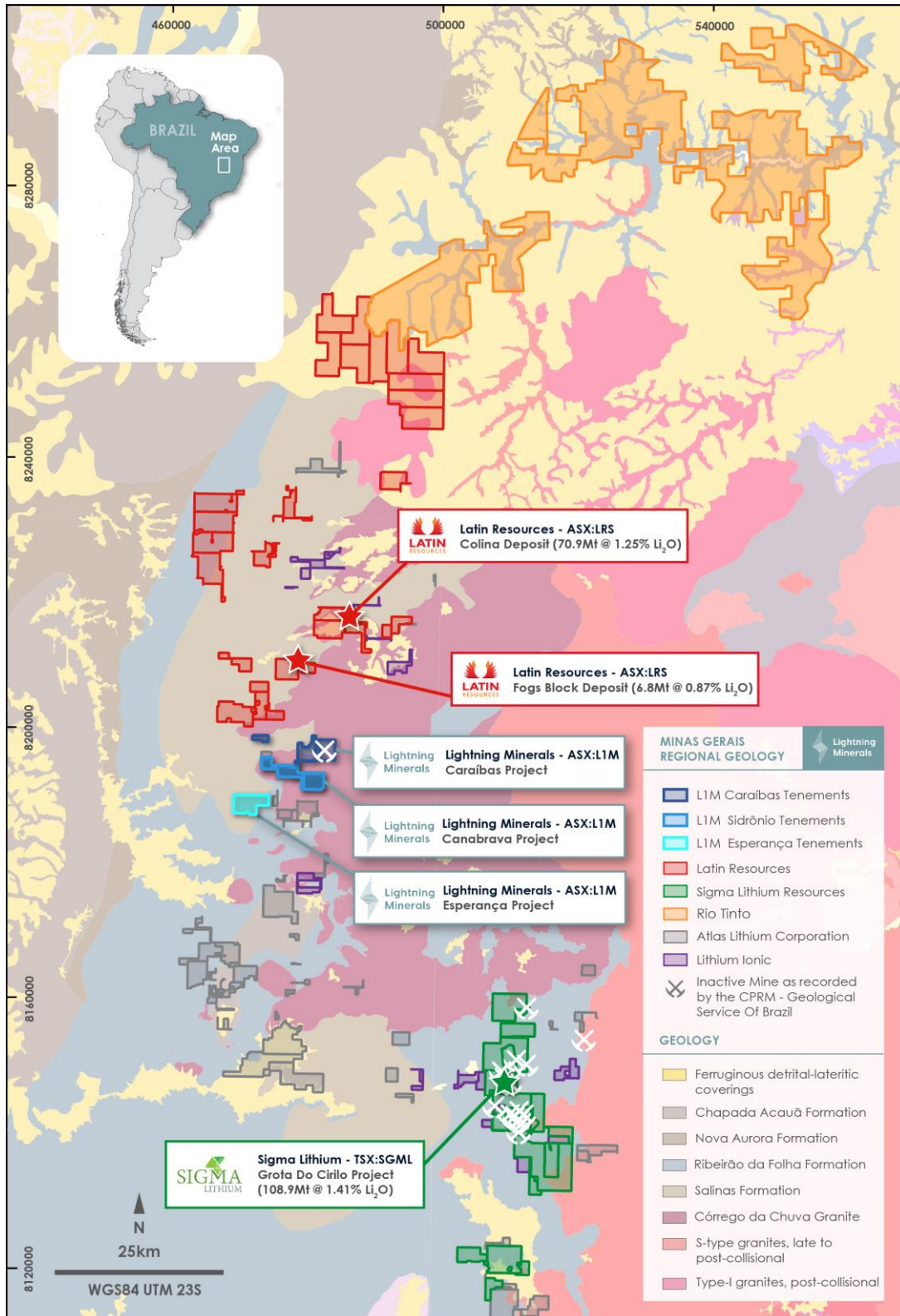


Figure 6: Local project location of Lightning Minerals' Brazilian lithium projects



For personal use only

Approved for release by the Board of Directors

-END-

More information at www.lightningminerals.com.au

ABOUT LIGHTNING MINERALS

Lightning Minerals is a mineral exploration company, listed on the Australian Securities Exchange (ASX:L1M) and focused on the exploration of critical minerals and lithium at its tenements across Western Australia. The recent acquisition of the Caraíbas, Sidrônio (now Canabrava) and Esperança lithium projects in Minas Gerais, Brazil are potentially transformational to the Company's success in the lithium sector. The Company also owns the Dundas project in the prolific Dundas region of Western Australia, the Dalmas and Hiver lithium projects in Quebec, Canada, another significant and evolving lithium region globally. The Company also holds other projects in Western Australia which include Mt Bartle and Mailman Hill which are prospective for base metals and critical minerals.

FORWARD LOOKING STATEMENTS

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

COMPETENT PERSONS STATEMENT

The information contained herein that relates to exploration results is based on information compiled or reviewed by Mr Jarrad Woodland, who is a Competent Person and a member of the Australasian Institute of Mining and Metallurgy. Mr Woodland is a full-time employee of the Company. Mr Woodland has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Woodland consents to the inclusion of his name in the matters based on the information in the form and context in which it appears. Mr Woodland holds options in Lightning Minerals.

REFERENCES TO PREVIOUS ANNOUNCEMENTS

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and that all material assumptions and technical parameters have not materially changed. The Company also confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.