LEO LITHIUM LTD



# SIGNIFICANT GOULAMINA MINERAL RESOURCE UPGRADE 48% INCREASE TO 211 MT

**Substantial increase in the Goulamina Resource to 211 Mt at a grade of 1.37% $Li_2O$ highlights Goulamina's status as a world class lithium pegmatite project and now the 5th largest global spodumene deposit. The result of this Mineral Resource update is the product of a highly successful drilling campaign.**

- Total Goulamina Resource tonnage increased by 48.2% to 211.0 Mt grading 1.37% $Li_2O$
- The Measured and Indicated Mineral Resource categories increased in tonnage by 26% to 102.3 Mt at a grade of 1.45% $Li_2O$
- Scope for further exploration potential as large parts of the resource remain open along strike and at depth
- Resource upgrade elevates Goulamina to the 5th largest global spodumene deposit
- Updated Mineral Resource sets the foundation for a new Ore Reserve estimate for Goulamina, scheduled to be completed in August 2023
- Encouraging results ahead of accelerated Direct Shipping Ore (DSO) revenue in Q4 2023, and first spodumene concentrate in H1 2024

Leo Lithium Limited **(ASX: LLL)** **(Leo Lithium** or **the Company)** is pleased to announce a substantial upgrade to the Mineral Resource Estimate **(MRE)** at its Goulamina Lithium Project **(Goulamina** or the **Project)**.

A resource definition drilling campaign was undertaken in the second half of 2022 and continued into the first half of 2023. The recently completed assessment of drilling results and the updated MRE for the Goulamina project has expanded the total Goulamina resource tonnage by 48.2%, from 142.3 Mt at 1.38% $Li_2O$ to **211.0 Mt at 1.37% $Li_2O$ (Table 1)**.

**Leo Lithium Managing Director, Simon Hay, commented**:

*"We are excited to report a very significant resource upgrade which confirms the outstanding scale, high-grade nature, and further growth potential of the Goulamina Project. An increase at Goulamina of 68.6 Mt from a very moderate drilling campaign, is a fantastic outcome. Furthermore, there is scope for additional growth as the deposit remains open at depth and along strike, creating new drilling targets for the geology team.*

*This significant upgrade also supports the possible extension of the 23-year mine life of the Goulamina Project and the recent Cooperation Agreement with Ganfeng. A key aspect of the* *cooperation agreement is for Leo Lithium to conduct an engineering study into raising Goulamina Stage 2 capacity to 500 ktpa, lifting overall Goulamina to 1 mtpa of spodumene concentrate*[1].

*Results from the MRE upgrade will flow into the planned Ore Reserve Estimate **(ORE)** upgrade which is scheduled for completion in August 2023.*

*These results are also encouraging ahead of first spodumene concentrate product in Q2 2024 and the early revenue opportunity from the targeted export of direct shipping ore in H2 2023."*

*Table 1: Goulamina Mineral Resource Estimate summary (0.5% Li2O reporting cut-off applied) – June 2023*

| Classification | Tonnes (Mt) | $Li_2O$ (Mt) | $Li_2O$ (%) | $Fe_2O_3$ (%) | Density (t/m$^3$) |
|---|---|---|---|---|---|
| **Measured** | **13.1** | **0.21** | **1.59** | **0.93** | **2.73** |
| **Indicated** | **89.2** | **1.28** | **1.43** | **0.92** | **2.73** |
| **Inferred** | **108.6** | **1.41** | **1.30** | **0.83** | **2.73** |
| ***Total*** | ***211.0*** | ***2.89*** | ***1.37*** | ***0.87*** | ***2.73*** |

*Notes:*

- *Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).*
- *Data is reported to significant figures and differences may occur due to rounding.*
- *Mineral Resources have been reported at a 0.5% $Li_2O$ cut-off grade above a US$1,500 optimised pit shell.*

Independent resource consultancy CSA Global (an ERM Group Company) was commissioned to update the MRE resulting in the classification of Measured, Indicated, and Inferred Mineral Resources. The reported resources in this MRE are constrained below the TOFR (Top of Fresh Rock) surface and reported within a US$1500 optimised pit shell. Mineralised pegmatite material within the optimised pit shell is considered to have *reasonable prospects for eventual economic extraction* (RPEEE).

## Goulamina Mineral Resources Summary

The updated MRE for the Goulamina Lithium Project incorporates all historical data and recent drilling data completed by Leo Lithium up to 5 June 2023 which are presented in Table 2 and shown in Figures 2-5. The Danaya and the Northeast Domains have been updated in this MRE.

## Introduction

The world class Goulamina spodumene pegmatite orebody consists of sub-parallel dykes currently defined within the Northeast (NE) and the Danaya Domains. The dykes at Danaya are moderately to steeply dipping to the east and are generally striking SSE-NNW. The pegmatite dykes of the NE Domains are dipping moderately to the east and are generally striking SSE-NNW, with dip flattening towards the NW. The MRE update includes all historic drilling data and all the

[1] 65% of the Stage 2 Capacity is a production target as detailed in the Replacement Prospectus dated 6 May 2022 available at leolithium.com. The remainder is not a production target pursuant to the ASX Listing Rules, as it is an aspirational statement and Leo Lithium does not yet have reasonable grounds to believe the statement can be achieved.

results received before the database cut-off date from the resource definition drilling campaign. The key objective of the drilling program was to increase the confidence level of the Mineral Resource and increase the overall Mineral Resource base.

*Table 2: Total Goulamina Mineral Resource (0.5% $Li_2O$ reporting cut-off applied) – June 2023*

| Classification | Domain | Tonnes (Mt) | $Li_2O$ (Mt) | $Li_2O$ (%) | $Fe_2O_3$ (%) | Density (t/m³) |
|---|---|---|---|---|---|---|
| **Measured** | Main I | 6.3 | 0.09 | 1.48 | 0.85 | 2.73 |
| | West I | 3.8 | 0.06 | 1.68 | 1.02 | 2.73 |
| | Sangar I | 3.0 | 0.05 | 1.70 | 0.96 | 2.73 |
| | ***Subtotal*** | ***13.1*** | ***0.21*** | ***1.59*** | ***0.93*** | ***2.73*** |
| **Indicated** | Main I | 4.7 | 0.05 | 1.13 | 0.97 | 2.73 |
| | Main (other) | 0.6 | 0.01 | 1.78 | 0.79 | 2.73 |
| | West I | 10.0 | 0.14 | 1.42 | 0.96 | 2.73 |
| | West II | 0.9 | 0.01 | 1.31 | 1.13 | 2.73 |
| | West (other) | 0.7 | 0.01 | 1.35 | 1.03 | 2.73 |
| | Sangar I | 15.2 | 0.24 | 1.55 | 0.89 | 2.73 |
| | Sangar II | 11.1 | 0.17 | 1.50 | 0.97 | 2.73 |
| | Sangar III | 6.1 | 0.09 | 1.46 | 0.77 | 2.73 |
| | Sangar (other) | 5.0 | 0.06 | 1.23 | 0.96 | 2.73 |
| | Danaya | 35.1 | 0.50 | 1.42 | 0.90 | 2.73 |
| | ***Subtotal*** | ***89.2*** | ***1.28*** | ***1.43*** | ***0.92*** | ***2.73*** |
| **Inferred** | Main I | 3.1 | 0.04 | 1.21 | 0.92 | 2.73 |
| | Main (other) | 7.0 | 0.10 | 1.48 | 1.00 | 2.73 |
| | West I | 7.9 | 0.10 | 1.32 | 0.66 | 2.73 |
| | West II | 1.3 | 0.01 | 1.00 | 0.94 | 2.73 |
| | West (other) | 3.3 | 0.04 | 1.28 | 0.95 | 2.73 |
| | Sangar I | 18.3 | 0.27 | 1.48 | 0.65 | 2.73 |
| | Sangar II | 11.3 | 0.14 | 1.24 | 0.68 | 2.73 |
| | Sangar III | 7.5 | 0.10 | 1.36 | 0.72 | 2.73 |
| | Sangar (other) | 6.3 | 0.09 | 1.36 | 0.85 | 2.73 |
| | Danaya | 42.6 | 0.51 | 1.19 | 0.95 | 2.73 |
| | ***Subtotal*** | ***108.6*** | ***1.41*** | ***1.30*** | ***0.83*** | ***2.73*** |
| ***Total*** | | ***211.0*** | ***2.89*** | ***1.37*** | ***0.87*** | ***2.73*** |

*Notes:*

- *Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).*
- *Data is reported to significant figures and differences may occur due to rounding.*
- *Mineral Resources have been reported at a 0.5% $Li_2O$ cut-off grade above a US$1,500 optimised pit shell.*

*Table 3: Goulamina Mineral Resource (0.5% $Li_2O$ reporting cut-off applied) June 2023 compared to previous MRE in January 2023*

| Classification | Tonnes (Mt) | | Change (%) |
|---|---|---|---|
| | June 2023 | Jan. 2023 | |
| **Measured** | **13.1** | 8.4 | 56.0 |
| **Indicated** | **89.2** | 72.8 | 22.5 |
| **Inferred** | **108.6** | 61.1 | 77.7 |
| ***Total*** | ***211.0*** | ***142.3*** | ***48.2*** |

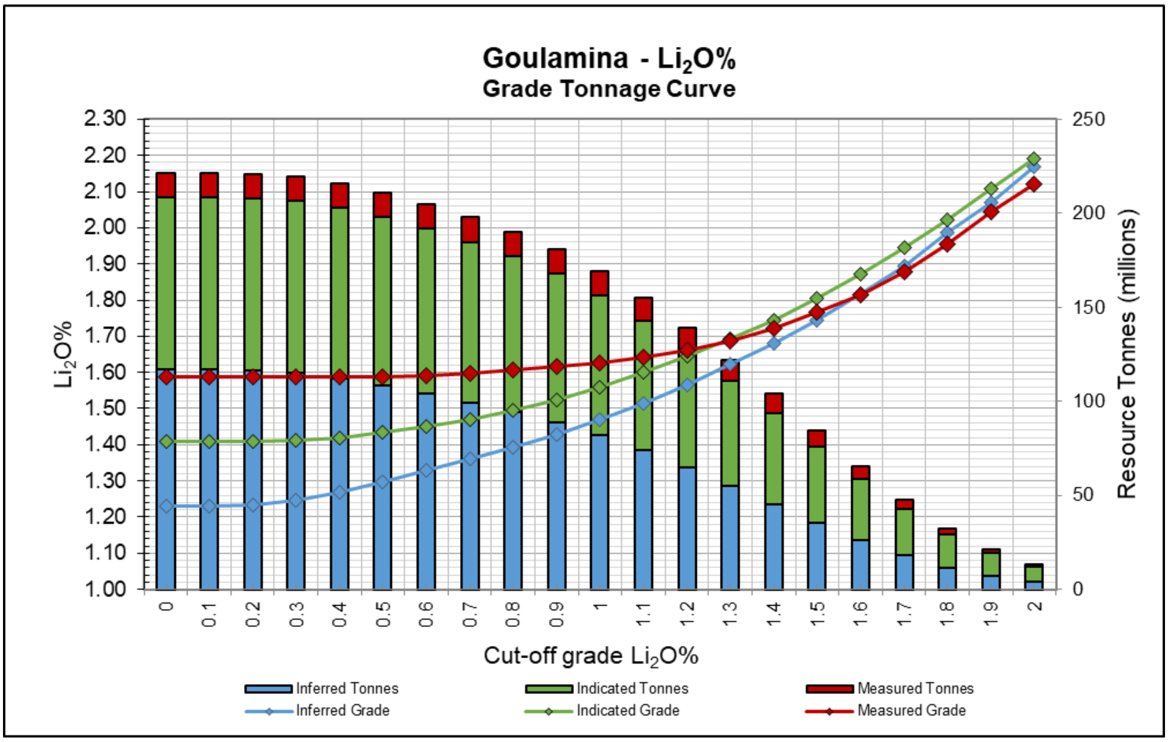


*Figure 1: Grade-tonnage curve for Goulamina, Measured, Indicated, and Inferred Mineral Resources*

## Goulamina Resource

Leo Lithium successfully completed a significant resource drilling campaign during 2022 and the first half of 2023. Since the last published MRE[1] Leo Lithium drilled an additional 30,852 metres RC and 9,719 metres HQ diamond core at an approximate cost of US$5 million. The drilling details are listed in Table 4 and Collar locations are shown in Figures 3 and 4. Drilling results have progressively been announced in ASX releases[2]. Remaining assay results and drill hole details not yet published are tabulated in Appendix 1 and shown in Figure 2. Significant down-hole intercepts include:

[1]Danaya update 17 January 2023, Total Goulamina update 20 July 2020
[2]24 May 2023, 13 April 2023, 14 December 2022 and 3 November 2022

- **134.89 metres at 1.63 % $Li_2O$, from 99.96 m**
  and **59.16 metres at 1.58 % $Li_2O$, from 252.4 m (GMDD033)**
- **141 metres at 2.15 % $Li_2O$, from 81 m (GMRC703)**
- **158 metres at 1.33 % $Li_2O$, from 118 m (GMRC705)**

*Table 4: Drill hole details for additional Holes drilled since the last MRE*

| Area | Drill Type | Drill Holes | Metres | Comments |
|---|---|---|---|---|
| **Danaya** | **DD** | 3 | 920 | |
| | **RC** | 52 | 10,398 | |
| **NE** | **DD** | 13 | 3,381 | |
| | **RC** | 57 | 11,990 | |
| | **RCD** | 45 | 8,464 | RC Pre Collar |
| | | | 5,417 | DD Tail |
| ***Total*** | | | ***40,571*** | |

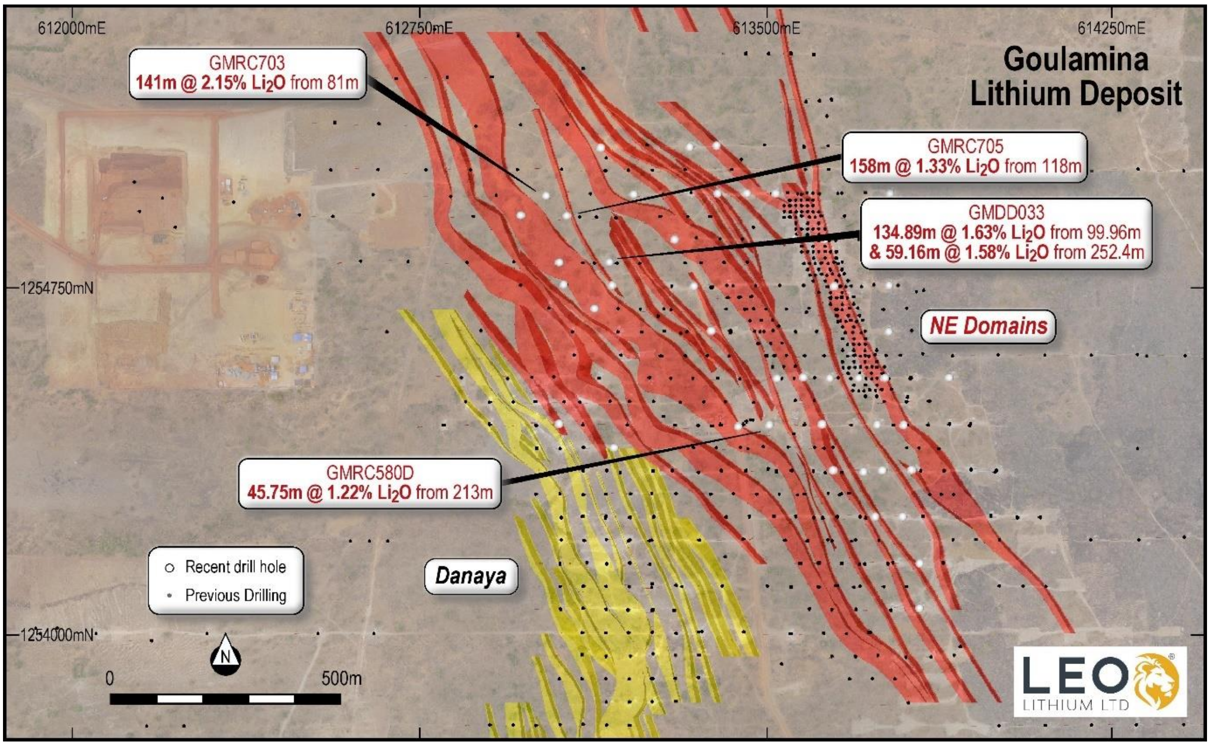

*Figure 2: Additional Drill Holes not yet released to the market, updated geological model sliced at 300mRL.*

Drilling has identified several new pegmatite domains and extended existing domains along northern strike direction and down dip. The dykes are currently modelled over an approximate 3,000 metre strike extent with individual true dyke widths of up to 100 metres. The pegmatites are characterised by typical pinching and swelling.

Weathered oxidised material in the Goulamina deposit is excluded from the resource. Only material below the TOFR surface is reported as part of the MRE.

Future drilling is planned for after the upcoming wet season and will focus on resource extensions along strike and down dip, outside the optimised RPEEE pit shell as well as increasing the confidence level by converting Inferred to Indicated material within the pit shell.

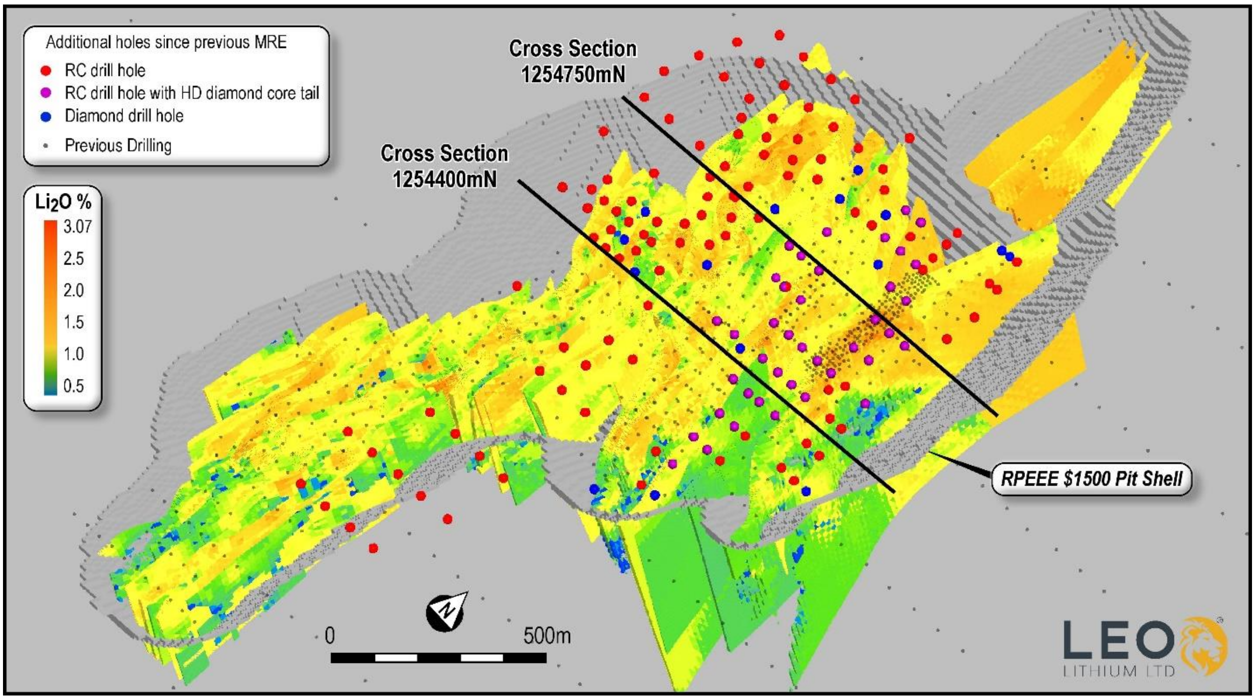


*Figure 3: Oblique view of the updated Goulamina Resource Block Model at a 0.5% $Li_2O$ cut-off grade. Block Model $Li_2O$ grade shown and coloured by grade. Additional drill holes since the last MRE shown in red, blue and purple dots. US$1500 RPEEE pit shell shown in grey. Only material within the pit shell is reported as Mineral Resource.*

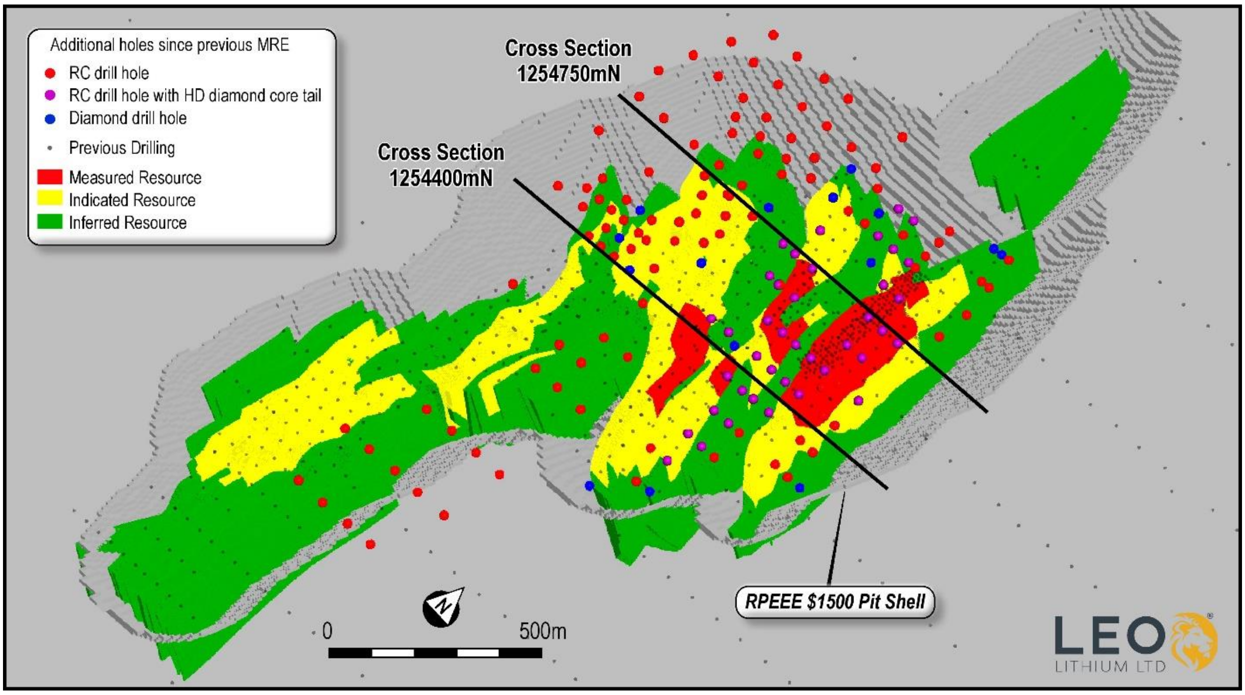


*Figure 4: Oblique view looking Northwest, of the updated Goulamina block model. Inferred resource category in green, Indicated resource category in yellow, and Measured resource category in red.*

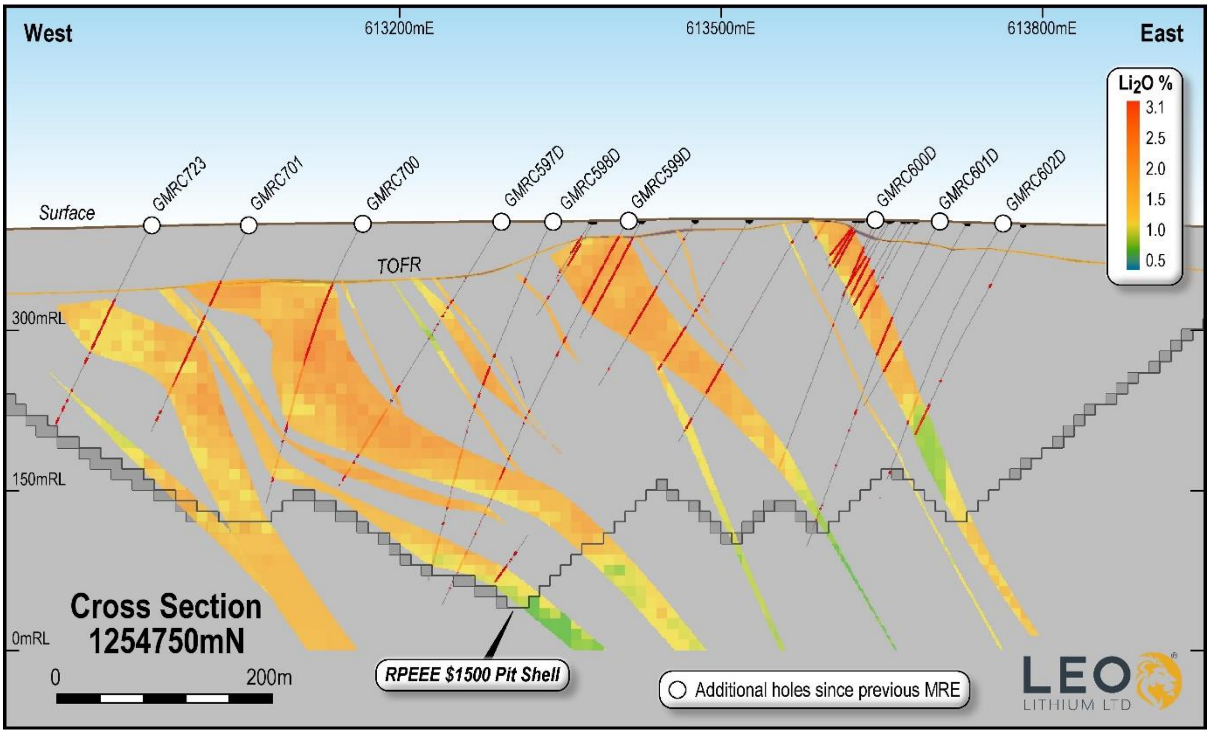


*Figure 5: Section 1254750mN showing the the Goulamina block model coloured by grade. Block model grade legend in upper right hand corner. Mineral Resoure reported below top of fresh rock surface and within RPEEE pit shell.*

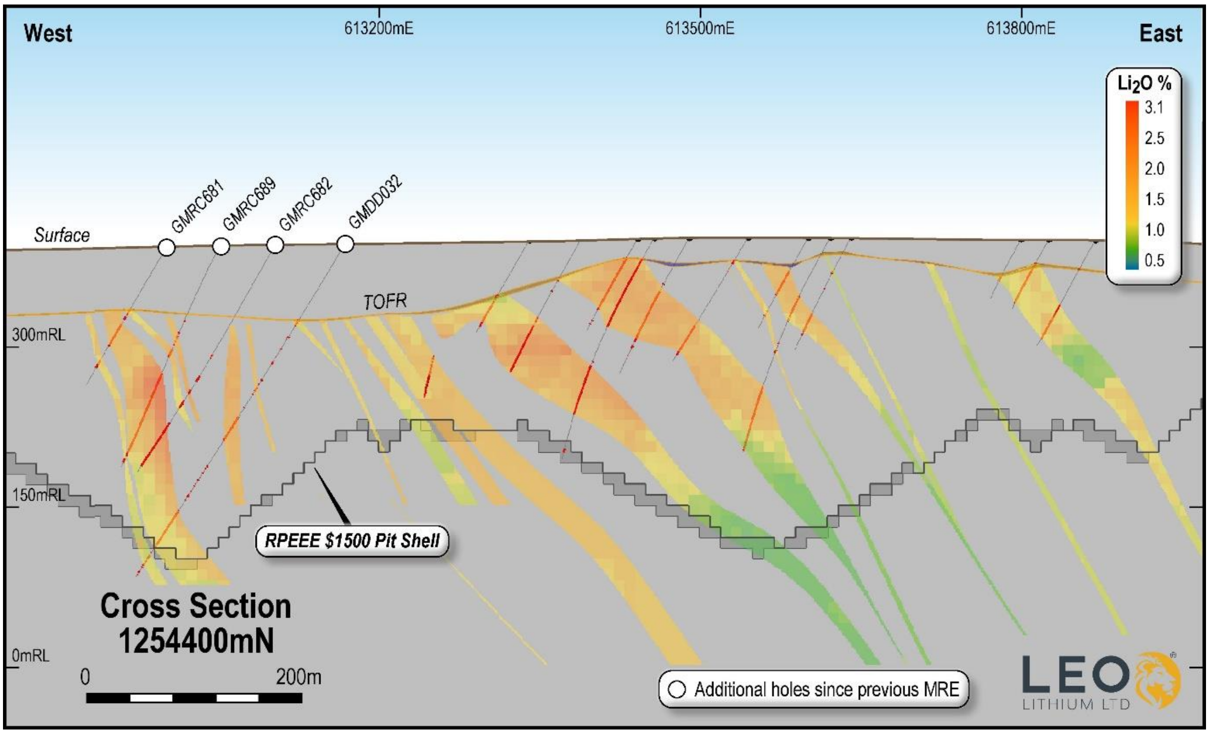


*Figure 6: Section 1254400mN showing the Goulamina block model coloured by grade. Block model grade legend shown in upper right hand corner. Mineral resource reported below top of fresh surface and within RPEEE pit shell.*

## SUMMARY OF MINERAL RESOURCE ESTIMATE AND REPORTING CRITERIA

As per ASX Listing Rule 5.8 and the 2012 JORC reporting guidelines, a summary of the material information used to estimate the Mineral Resource is detailed below (for more detail please refer to JORC **Table 1, Sections 1 to 3** included below in **Appendix 2**).

### Mineral Tenement

The Goulamina Lithium Project is entirely within the Torakoro Exploitation Permit PE 19/25 in Mali, PE 19/25 is 100% held by Lithium du Mali SA, a 50-50 joint venture between Leo Lithium and Ganfeng Lithium Co., Limited.

### Geology

The Project area is located within the Bougouni region of Southern Mali, where broadly North-South trending belts of Birimian aged (Paleoproterozoic) meta-volcanic and meta-sedimentary rocks are intruded by syn-and post-orogenic granitoids.

Within the Project area, outcrop is limited, and the understanding of basement geology therefore comes mainly from drillholes. Regolith typically comprises a surficial transported horizon overlying a laterite weathering profile. A prominent feature of the lateritic profile is a plateau of a hard iron-rich ferricrete ("cuirasse"). Limited outcrop mapping and information from geological logging of exploration drillholes indicates northeast striking metapelite and metagreywacke rocks in the north and eastern parts of the property.

The Goulamina pegmatite deposit is almost entirely hosted within a granodiorite. Recent drilling intersected Pegmatite mineralisation within Birimian metasediments along the granodiorite metasediment contact. The most abundant dyke facies within the Goulamina deposit consists of a relatively coarse spodumene pegmatite which makes up approximately 85% of the Danaya dyke swarm and about 75% of the northeast domains. Crystal sizes range from 1 cm to up to 10 cm. The remaining part of the mineralisation is composed of a fine-grained aplite which is often mineralised but can also be barren. The aplite distribution within the deposit is not predictable and therefore not domained separately.

The Lithium-bearing pyroxene mineral spodumene is the only recognised lithium mineral, along with other major minerals of quartz and feldspar (albite and microcline). Geological logging also identified accessory amounts of muscovite, tourmaline, apatite and biotite.

### Drilling Techniques and Hole Spacing

Drill holes were drilled in several contiguous phases, from October 2017 to June 2023. Drill holes were generally dipping -60 degrees, oriented due west, to intercept the steeply dipping pegmatite dykes at a high angle.

RC drilling was completed by AMCO Drilling SARL (AMCO), and Capital Drilling (MALI) SARL (Capital), using nominally 5.5-inch diameter equipment, with a face sampling downhole hammer.

Core drilling equipment was supplied and operated by AMCO and Capital. Drillhole diameter ranges from PQ size within highly weathered and oxidized zone and standard HQ size diameter within fresh rock. Diamond holes were drilled from surface or as diamond tails on RC holes. Core was orientated down hole so that structural measurements could be taken.

Drill holes for the resource programs are spaced approximately 30 to 50 m apart on 25 m, 50 m or 100 m spaced sections. The spacing is sufficient to establish grade and geological continuity and is appropriate for the resource classifications applied.

Additional grade control drilling completed in 2023 in the Main pegmatite at a 12.5 m by 12.5 m spacing confirms the grade and geological continuity within the Measured Resource.

### Sampling Techniques

Samples were collected from RC drilling and submitted for assay. Samples submitted to the laboratory typically weighed 2-3 kg over an average 1 m interval. Samples were subsampled by a riffle splitter at the drill rig.

Diamond drill core was collected directly into core trays. The drill core was then transported to the core processing facility where the core was marked up by metre marks and bottom orientation line. Core was cut longitudinally along a cut line next to the core orientation line. Half core without orientation line was collected on a metre basis where possible, sample lengths at contacts varied in length.

Pegmatites along with at least two metres of granitic material either side of the pegmatite contact are sampled and prepared for assay. Granitic material distal to the pegmatites is not sampled.

### Sample Analysis

Recent sample preparation work was conducted by MSA LABS in Bougouni and SGS Mali SARL (SGS) in Bamako, Mali. Samples were weighed, dried, and crushed to -2 mm in a jaw crusher. Representative 1 kg split sample of the crushed sample was subsequently pulverised in a tungsten carbide ring mill to achieve a nominal particle size of 85% passing 75 microns. Sample sizes and laboratory preparation techniques are considered appropriate. Representative sub-samples of the pulverised material were sent to the SGS laboratory in Randfontein in South Africa and to MSA Labs Vancouver in Canada for assay. Analysis of lithium and a suite of other elements was undertaken by inductively coupled plasma atomic emission spectroscopy (ICPAES), after a sodium peroxide fusion (SGS method ICP90A, MSA Labs method PER-700). The sodium peroxide fusion method is a total dissolution technique for lithium bearing silicate minerals. Detection limits for Lithium are 0.01 – 10%.

In the 2017/2018 campaign, samples were prepared by ALS Mali SARL (ALS) in Bamako and representative sub-samples were sent to ALS in Perth for Assay. Analysis was undertaken by ICPAES, after a sodium peroxide fusion (ALS method ME-ICP89, and ME_MS91.

### Estimation Methodology

Estimation domains for all mineralised pegmatites (except for several insignificant narrow structures of uncertain orientation), were digitised on cross sections and built in Leapfrog™ Geo software. Drill hole sample data were flagged using domain codes generated within each of the mineralised domain wireframes. Samples were composited to 1 m intervals based on an assessment of the drillhole sample interval lengths.

Grade estimation was by Ordinary Kriging for $Li_2O$ and $Fe_2O_3$ using GEOVIA Surpac™ software. The estimate was resolved into 10 m (E) by 20 m (N) by 10 m (RL) parent cells that had been sub-celled at the domain boundaries for accurate domain volume representation. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics. Based on the statistical analysis of the data population, no top-cuts were applied for $Li_2O$ and

$Fe_2O_3$. The estimation search employed a dynamic anisotropy to allow the ellipse to rotate along the arcuate mineralisation domains.

Model validation was carried out using a combination of visual and statistical comparison of input data and estimated block grades, swath plots, and wireframe volume checks.

## Cut-off Grade

There is a strong correlation between pegmatites and lithium mineralisation. There is usually a sharp cut-off in mineralisation at the contact between the lithium-bearing pegmatites and the host granitic material. The boundaries of the pegmatites are in most cases used as a de facto grade boundary. In some instances, where it appears that the contact has not been interpreted correctly, possibly due to metasomatic or metamorphic alteration at the boundary, the grade boundary is based on the grade distribution.

Leo Lithium intends to mine the spodumene pegmatites from footwall to hanging wall as they are generally mineralised throughout. This approach is based on preliminary economic considerations and the ability to make a saleable lithium concentrate from mining the entire pegmatite rather than defining internal low-grade components.

The Mineral Resource reporting cut-off grade has been set to 0.5% $Li_2O$. The cut-off grade was selected based on a review of the estimated lithium block grades, with sub-grade (<0.5% $Li_2O$) mineralisation identified at depth and to the south within the RPEEE pit shell.

## Classification criteria

The Mineral Resource has been classified based on confidence in the geological model, continuity of mineralised zones, drilling density, confidence in the underlying database and the available bulk density information. The Goulamina Mineral Resource has been classified as Measured, Indicated and Inferred in accordance with guidelines contained in the 2012 JORC Code.

The Measured Mineral Resources are reported for areas within the NE mineralised domains where in the Competent Person's opinion there is sufficient confidence to allow the application of modifying factors. Measured Mineral Resources are reported for areas with drill spacing of 25 m by 25 m or better.

The Indicated Mineral Resources are reported for areas within the NE and Danaya mineralised domains with 50 m by 50 m spacing.

Inferred Mineral Resources are reported for the periphery and depth extents of the major NE and Danaya mineralised domains and in smaller domains with limited samples. The Inferred classification generally represents areas with greater than 50 m by 50 m drillhole spacing.

## Mining and metallurgical methods and parameters

An updated Definitive Feasibility study (DFS) was completed December 2021. The Project is scheduled to be mined using conventional open-pit mining methods involving drilling, blasting, loading and hauling. The Mineral Resource is reported above a Whittle™ optimised output shell (at US$1,500) to determine the extent of resources that have reasonable prospects for eventual economic extraction. The optimisation parameters used for the RPEEE pit shell are based on the DFS outcomes completed in December 2021 (Firefinch ASX release 6/12/2021)

The MRE is supported by metallurgical test work undertaken between 2017 and 2020. The test work programs included comminution test work, mineralogy using QEMSCAN, reflux classification, heavy liquid separation and dense mediate separation (DMS) test work, flotation, and magnetic separation test work. A process flowsheet was developed based on the metallurgical test work programs. These resulted in an 87% $Li_2O$ recovery in flotation, and overall recovery of >76% $Li_2O$, producing a high-quality chemical grade spodumene concentrate at >6% $Li_2O$ with low mica. The results of these test work programs support the DFS.


LEO LITHIUM LTD

**Leo Lithium (ASX: LLL)** is developing the world-class Goulamina Lithium Project (Goulamina) in Mali. Goulamina represents the next lithium project of significant scale to enter production. The hard rock lithium project will be the first of its kind in West Africa. Construction is underway and first production is targeted for H1 2024.

**Globally significant project**: Forecast spodumene concentrate production of 506ktpa, increasing up to 831ktpa under Stage 2[2], positions Goulamina amongst the world's largest spodumene projects.

**Development underway and substantially funded**: One of a limited number of lithium development projects globally which are substantially funded. Ganfeng have provided US$130 million in equity funding and a US$40 million debt facility into the JV and a A$106 million placement into Leo Lithium.

**Large scale, high grade orebody**: World-class, high grade hard rock lithium deposit with a Mineral Resource of 211.0 Mt at 1.37% $Li_2O$ and Ore Reserve of 52 Mt at 1.51% $Li_2O$ (1.9 Mt LCE).

**Quality product**: High quality spodumene concentrate with test work validating 6% $Li_2O$ with low impurities and having been successfully converted to battery grade lithium hydroxide.

**World-class partner**: Project being developed in 50/50 partnership with Ganfeng, the world's largest lithium chemical producer by production capacity, providing funding, offtake and operational support to de-risk development.

**Decarbonisation thematic**: Providing an essential raw material to the lithium-ion battery value chain for a clean energy future.

This announcement has been approved for release to the ASX by the Board.

For Enquiries

Simon Hay
Managing Director
Leo Lithium Limited
info@leolithium.com
+61 8 6314 4500

Shane Murphy
FTI Consulting
Shane.murphy@fticonsulting.com
+61 420 945 291

2. Based on first 5 years of steady state Stage 2 production.

## Follow Leo Lithium

**Twitter**: https://twitter.com/leolithiumltd
**LinkedIn**: https://www.linkedin.com/company/leo-lithium-ltd/
**Website**: https://leolithium.com
**Subscribe to email alerts**: https://leolithium.com/subscribe/

### Ore Reserves, Mineral Resources and Production Targets

The information in this announcement that relates to production targets, and current Ore Reserves is extracted from the Company's replacement prospectus dated 6 May 2022 (Prospectus) which is available at leolithium.com. The Company confirms that all material assumptions and technical parameters underpinning the production targets and Ore Reserve estimates in the Prospectus continue to apply and have not materially changed and it is not aware of any new information or data that materially affects the information included in the Prospectus.

### Competent Persons Statement

The information in this announcement that relates to Exploration Results at Goulamina is based on information compiled by Mr Sebastian Kneer. Mr Kneer is a full-time employee of Leo Lithium Limited and a member of the Australian Institute of Geoscientists. Mr Kneer has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined in the JORC Code. Mr Kneer is responsible for the data quality informing the Mineral Resource including Sections 1 and 2 of the JORC Table 1. Mr Kneer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to the Goulamina Mineral Resources is based on information compiled by Mr Matt Clark. Mr Clark is a is a full-time employee of CSA Global (an ERM Group Company) and has acted as an independent consultant on the Goulamina Mineral Resource estimation. Mr Clark is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code)". Mr Clark is responsible for the Goulamina Mineral Resource estimate including Sections 3 of the JORC Table 1. Mr Clark consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# Appendix 1 – Drill Hole Intercepts and Drill Hole Collar Table

Significant Lithium assay results greater than 10 m down hole width

| Hole ID | Domain Area | From (m) | To (m) | Interval (m) | $Li_2O$ (%) |
|---|---|---|---|---|---|
| GMRC598D | NE | 229.44 | 266 | 36.56 | 1.60 |
| And | | 278.9 | 288 | 9.1 | 1.94 |
| And | | 315.3 | 333 | 17.7 | 1.48 |
| GMDD025 | NE | 63.1 | 122.2 | 59.1 | 1.69 |
| GMRC609D | NE | 226.8 | 263.8 | 37 | 1.80 |
| GMRC605D | NE | 273 | 293.71 | 20.71 | 1.39 |
| GMRC603D | NE | 57.4 | 68.3 | 10.9 | 1.28 |
| AND | | 149 | 160.6 | 11.6 | 1.66 |
| AND | | 273 | 310 | 37 | 1.61 |
| GMRC592D | NE | 200 | 215 | 15 | 1.60 |
| And | | 269.9 | 280.1 | 10.2 | 1.46 |
| GMRC588D | NE | 320 | 331 | 11 | 1.51 |
| GMRC582D | NE | 248 | 259 | 11 | 1.39 |
| GMRC580D | NE | 213 | 258.75 | 45.75 | 1.22 |
| GMRC568D | NE | 67 | 82 | 15 | 1.10 |
| GMRC604D | NE | 207.35 | 237.67 | 30.32 | 1.51 |
| GMDD024 | NE | 89.1 | 165 | 75.9 | 1.71 |
| GMRC610D | NE | 258 | 277 | 19 | 1.33 |
| GMRC586D | NE | 201 | 225 | 24 | 1.51 |
| GMRC608D | NE | 200 | 248 | 48 | 1.49 |
| GMRC600D | NE | 238 | 256.73 | 18.73 | 1.19 |
| GMRC579D | NE | 200 | 221 | 21 | 1.47 |
| GMRC562D | NE | 263 | 275.6 | 12.6 | 1.52 |
| GMRC561D | NE | 290.43 | 306.16 | 15.73 | 1.53 |
| GMDD033 | NE | 99.96 | 234.85 | 134.89 | 1.63 |
| And | | 252.4 | 311.56 | 59.16 | 1.58 |
| GMDD032 | Danaya | 191.3 | 217.3 | 26 | 1.70 |
| And | | 297.25 | 331 | 33.75 | 1.26 |
| GMDD031 | Danaya | 115.45 | 133.63 | 18.18 | 1.48 |
| And | | 175.26 | 192 | 16.74 | 1.83 |
| GMRC699 | NE | 68 | 80 | 12 | 1.25 |
| And | | 100 | 119 | 19 | 1.12 |
| And | | 134 | 145 | 11 | 1.08 |
| And | | 174 | 240 | 66 | 1.58 |
| GMRC700 | NE | 69 | 210 | 141 | 1.71 |
| GMRC701 | NE | 61 | 86 | 25 | 2.00 |
| And | | 117 | 179 | 62 | 1.41 |

| | | | | | |
|---|---|---|---|---|---|
| GMRC702 | NE | 56 | 106 | 50 | 1.82 |
| And | | 147 | 214 | 67 | 1.74 |
| GMRC703 | NE | 81 | 222 | 141 | 2.15 |
| GMRC704 | NE | 99 | 142 | 43 | 1.56 |
| And | | 171 | 185 | 14 | 1.39 |
| And | | 194 | 225 | 31 | 1.14 |
| And | | 237 | 270 | 33 | 1.80 |
| GMRC705 | NE | 118 | 276 | 158 | 1.33 |

Table 4: Significant assay results greater than 10 m down hole width. Intercepts calculated using a 0.5% $Li_2O$ cut-off grade (note: assays have been composited and may include internal low-grade material up to 6 m wide)

| Hole ID | Type | Depth (m) | Grid_ID | East | North | RL (m) | Dip (°) | Azi (°) | Domain | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| GMDD024 | DD | 183.2 | WGS84_29N | 613211.1 | 1254950.0 | 401.1 | -60.2 | 268.7 | NE | |
| GMDD025 | DD | 141 | WGS84_29N | 613140.0 | 1255050.0 | 401.0 | -61.6 | 265.2 | Danaya | |
| GMDD031 | DD | 251 | WGS84_29N | 613050.4 | 1254453.7 | 394.3 | -60.9 | 272.3 | Danaya | |
| GMDD032 | DD | 369 | WGS84_29N | 613168.8 | 1254401.9 | 395.6 | -59.4 | 267.8 | NE | |
| GMDD033 | DD | 318 | WGS84_29N | 613159.1 | 1254803.1 | 400.8 | -59.9 | 268.0 | NE | |
| GMRC560D | RCD | 269.3 | WGS84_29N | 613892.9 | 1254552.7 | 398.7 | -61.3 | 268.1 | NE | NSI |
| GMRC561D | RCD | 315 | WGS84_29N | 613793.5 | 1254854.5 | 397.9 | -64.0 | 266.4 | NE | |
| GMRC562D | RCD | 285 | WGS84_29N | 613765.4 | 1254952.5 | 398.2 | -60.8 | 274.4 | NE | |
| GMRC568D | RCD | 289.8 | WGS84_29N | 613829.0 | 1254054.5 | 396.4 | -60.0 | 270.0 | NE | NSI |
| GMRC570D | RCD | 392.4 | WGS84_29N | 613829.6 | 1254151.5 | 397.1 | -60.0 | 270.0 | NE | NSI |
| GMRC573D | RCD | 296.5 | WGS84_29N | 613792.6 | 1254252.8 | 398.5 | -60.3 | 267.6 | NE | NSI |
| GMRC574D | RCD | 317.5 | WGS84_29N | 613733.2 | 1254252.7 | 399.2 | -61.0 | 271.9 | NE | NSI |
| GMRC575D | RCD | 308.3 | WGS84_29N | 613748.9 | 1254352.8 | 400.2 | -60.6 | 270.8 | NE | NSI |
| GMRC576D | RCD | 290.5 | WGS84_29N | 613642.6 | 1254353.1 | 401.1 | -60.4 | 269.3 | NE | NSI |
| GMRC577D | RCD | 342.3 | WGS84_29N | 613812.3 | 1254354.1 | 399.4 | -59.8 | 268.1 | NE | NSI |
| GMRC578D | RCD | 342.2 | WGS84_29N | 613708.7 | 1254349.9 | 400.6 | -60.3 | 270.1 | NE | NSI |
| GMRC579D | RCD | 285.8 | WGS84_29N | 613437.9 | 1254448.1 | 400.9 | -66.5 | 275.3 | NE | |
| GMRC580D | RCD | 327.1 | WGS84_29N | 613504.8 | 1254451.2 | 401.8 | -60.9 | 266.8 | NE | |
| GMRC582D | RCD | 302.7 | WGS84_29N | 613618.7 | 1254452.6 | 402.1 | -60.9 | 267.7 | NE | |
| GMRC584D | RCD | 385 | WGS84_29N | 613737.9 | 1254451.8 | 401.2 | -60.5 | 271.6 | NE | NSI |
| GMRC585D | RCD | 290 | WGS84_29N | 613794.8 | 1254451.0 | 400.3 | -61.0 | 269.7 | NE | NSI |
| GMRC586D | RCD | 290.5 | WGS84_29N | 613521.1 | 1254551.0 | 402.6 | -59.3 | 270.1 | NE | |
| GMRC587D | RCD | 325.6 | WGS84_29N | 613578.3 | 1254553.4 | 402.8 | -63.8 | 267.8 | NE | NSI |
| GMRC588D | RCD | 362.3 | WGS84_29N | 613635.6 | 1254551.4 | 402.8 | -61.7 | 269.6 | NE | |
| GMRC589D | RCD | 285.2 | WGS84_29N | 613697.8 | 1254551.6 | 402.2 | -61.1 | 270.9 | NE | NSI |
| GMRC590D | RCD | 278.4 | WGS84_29N | 613754.2 | 1254552.2 | 401.3 | -60.4 | 268.7 | NE | NSI |
| GMRC592D | RCD | 291.5 | WGS84_29N | 613379.4 | 1254654.2 | 402.2 | -60.6 | 272.1 | NE | |
| GMRC596D | RCD | 336.2 | WGS84_29N | 613762.5 | 1254652.1 | 400.7 | -59.8 | 265.9 | NE | NSI |
| GMRC598D | RCD | 357.4 | WGS84_29N | 613342.3 | 1254751.0 | 401.9 | -61.1 | 268.1 | NE | |
| GMRC600D | RCD | 318.6 | WGS84_29N | 613644.9 | 1254751.2 | 402.9 | -66.3 | 276.6 | NE | |
| GMRC602D | RCD | 393.3 | WGS84_29N | 613763.2 | 1254752.6 | 400.0 | -59.2 | 273.6 | NE | NSI |
| GMRC603D | RCD | 355.6 | WGS84_29N | 613299.8 | 1254852.1 | 401.4 | -63.6 | 269.2 | NE | |
| GMRC604D | RCD | 304.1 | WGS84_29N | 613558.8 | 1254853.2 | 401.6 | -65.5 | 277.5 | NE | |
| GMRC605D | RCD | 351.3 | WGS84_29N | 613623.4 | 1254852.9 | 401.5 | -61.2 | 269.1 | NE | |
| GMRC608D | RCD | 255.8 | WGS84_29N | 613392.9 | 1254952.0 | 400.5 | -60.4 | 272.9 | NE | |
| GMRC609D | RCD | 305.6 | WGS84_29N | 613456.3 | 1254952.1 | 400.4 | -58.6 | 268.3 | NE | |
| GMRC610D | RCD | 355.8 | WGS84_29N | 613518.6 | 1254952.0 | 400.3 | -59.8 | 269.8 | NE | |
| GMRC611D | RCD | 257.5 | WGS84_29N | 613332.8 | 1255051.8 | 398.8 | -59.9 | 270.2 | NE | NSI |
| GMRC612D | RCD | 273.4 | WGS84_29N | 613390.6 | 1255054.7 | 399.1 | -61.6 | 267.8 | NE | NSI |
| GMRC699 | RC | 240 | WGS84_29N | 613126.8 | 1254702.5 | 398.4 | -60.5 | 270.8 | NE | |
| GMRC700 | RC | 279 | WGS84_29N | 613165.1 | 1254752.8 | 399.0 | -60.6 | 271.4 | NE | |
| GMRC701 | RC | 216 | WGS84_29N | 613060.3 | 1254754.2 | 397.5 | -60.9 | 270.8 | NE | |
| GMRC702 | RC | 215 | WGS84_29N | 613050.5 | 1254802.4 | 397.5 | -60.3 | 265.8 | NE | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| GMRC703 | RC | 250 | WGS84_29N | 613022.1 | 1254947.0 | 395.4 | -60.1 | 267.9 | NE | |
| GMRC704 | RC | 270 | WGS84_29N | 612967.6 | 1254904.4 | 394.8 | -59.3 | 269.0 | NE | |
| GMRC705 | RC | 282 | WGS84_29N | 613067.2 | 1254903.4 | 398.3 | -61.1 | 271.4 | NE | |

*Table 5: Drillhole collar details, NSI (No Significant Intercept within diamond core tail, RC Hole might have intersected mineralisation and was reported in previous releases), DD (Diamond Drill Core), RCD (RC with diamond tail)*

# Appendix 2 - JORC 2012 - Table 1

## JORC Table 1 Section 1 – Sampling Techniques and Data

*(Criteria in this section apply to all succeeding sections)*

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Sampling techniques** | *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*<br>*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>*Aspects of the determination of mineralisation that are Material to the Public Report.*<br>*In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.* | • One metre samples were collected using Reverse Circulation (RC) drilling with a ~140 mm bit.<br>• The entire sample is collected from the cyclone on the rig in plastic bags and then split by hand using a riffle splitter to collect a nominal 2 kg sample in a prenumbered cotton sample bag.<br>• The entire sample is dried, then is crushed to 75% passing 2 mm in a jaw crusher.<br>• A 1.5 kg sample is split using a riffle splitter.<br>• The 1.5 kg split is pulverised in a tungsten carbide ring and puck pulveriser to 85% passing 75 µm.<br>• Diamond core was drilled using HQ size (64 mm) core and sampled as one metre intervals and sampled to lithology contacts.<br>• Diamond core is split longitudinally with a core saw, with half being retained in core trays at site or sent to Perth, Western Australia (mineralised material only) to support metallurgical testing, and the remaining material being split into 1m (dominantly) samples and assayed using the same process as for RC samples.<br>• Pegmatites along with at least two metres of granitic material either side of the pegmatite contact are sampled and prepared for assay. Granitic material distal to the pegmatites is not sampled and is treated as having an assay of 0 % $Li_2O$. |
| **Drilling techniques** | *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | • Samples in the Resource program were collected using a combination of RC and Diamond drillholes drilled from surface and as tails to RC holes.<br>• Diamond tails were drilled as HQ-diameter with triple tube. |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| **Drill sample recovery** | *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>*Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>*Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | • The entire sample was collected from the cyclone and subsequently split by hand in a riffle splitter.<br>• Condition of the sample is recorded (ie Dry, Moist, or Wet).<br>• Where samples were wet (due to ground water) there is a possibility that the assay result could be biased through loss of fine material.<br>• Core recovery is measured by comparing the length of core recovered against the expected length.<br>• Core is usually collected using triple tube drilling which optimises the integrity of the core within the drill rods.<br>• Core recovery from diamond core is excellent with only minor (<1%) amounts of core lost. |
| **Logging** | *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>*Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>*The total length and percentage of the relevant intersections logged.* | • Chips and core were geologically logged at site in their entirety, and in the case of RC drilling a representative fraction collected in a chip tray. The logs are sufficiently detailed to support Mineral Resource estimation. Logged criteria includes lithology, weathering, alteration, mineralisation, veining, and sample condition.<br>• Geological logging is qualitative in nature although percentages of different lithologies, sulphides, and veining are estimated. |
| **Subsampling techniques and sample preparation** | *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>*If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>*For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>*Quality control procedures adopted for all subsampling stages to maximise representivity of samples.*<br>*Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.*<br>*Whether sample sizes are appropriate to the grain size of the material being sampled.* | • All RC samples collected for resource purposes are riffle split by hand using a stand-alone splitter. This technique is appropriate for collecting statistically unbiassed samples. The riffle splitter is cleaned with compressed air and soft brushes between each sample.<br>• Samples are weighed to ensure a sample weight of between 2 and 3 kg. Samples of between 2 and 3 kg are considered appropriate for determination of contained lithium and other elements using the sodium peroxide fusion process.<br>• Diamond core is split longitudinally with a core saw, with half being sampled for resource purposes, and the other half being retained in core trays.<br>• Certified reference standards, Blanks, and duplicates are inserted into the sample stream as the samples are collected at a rate of 10%.<br>    o Field duplicates are inserted every 20 samples.<br>    o Blanks (derived from unmineralized river sand) and Certified reference material standards (CRMs) are inserted alternately every 20 samples. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Quality of assay data and laboratory tests** | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>*For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>*Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* | • Samples are analysed for Lithium using an industry standard technique (SGS method ICP90A and MSA LABS method PER-700) by:<br>o drying the sample<br>o crushing the sample to 75% passing -2mm<br>o 1.5kg split by riffle splitter<br>o Pulverise to 85% passing 75 microns in a tungsten-carbide ring and puck pulveriser<br>o Samples are analysed for lithium and other elements by ICPOES after a sodium peroxide fusion.<br>• Laboratory checks include:<br>o Every 50th sample is screened to confirm % passing 2mm and 75 microns.<br>o 1 reagent blank every 84 samples<br>o 1 preparation blank every 84 samples<br>o 2 weighed replicates every 84 samples<br>o 1 preparation duplicate (re split) every 84 samples<br>o 3 CRMs every 84 samples.<br>• CRMs, Blanks, and duplicates are inserted into the sample stream as the samples are collected at a rate of 10%.<br>o Field duplicates are inserted every 20 samples<br>o Blanks (derived from unmineralized river sand) and CRMs are inserted alternately every 20 samples.<br>• Acceptable levels of accuracy and precision were established in the quality control data. |
| **Verification of sampling and assaying** | *The verification of significant intersections by either independent or alternative company personnel.*<br>*The use of twinned holes.*<br>*Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>*Discuss any adjustment to assay data.* | • All drilling and exploration data are stored in the company database which is hosted by an independent geological database consultant.<br>• Drilling and sampling procedures have been developed to ensure consistent sampling practices are used by site personnel.<br>• Logging and sampling data are collected on a Toughbook PC at the drill site and provided directly to the database consultant, to limit the chance of transcription errors.<br>• Four twin holes have been completed and show comparable grade statistics between diamond and RC drilling.<br>• Where duplicate assays are measured the value is taken as the first value, and not averaged with other values for the same sample.<br>• QAQC reports are generated regularly by the database consultant to allow ongoing reviews of sample quality.<br>• There are no adjustments to assay data. |
| **Location of data points** | *Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | • Drill hole collars are initially located using GPS. They are subsequently surveyed using RTK DGPS systems.<br>• Down hole dip and azimuth are collected using a north seeking Gyro measuring every 20 to 50 m for RC drilling. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *Specification of the grid system used.*<br>*Quality and adequacy of topographic control.* | • Coordinates are recorded in UTM WGS94 29N<br>• Topographic control is considered adequate for the current drill spacing. |
| **Data spacing and distribution** | *Data spacing for reporting of Exploration Results.*<br>*Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>*Whether sample compositing has been applied.* | • Drill holes for the resource programs are spaced approximately 30 to 50 metres apart on 25 m, 50 m or 100 m spaced sections.<br>• The spacing is sufficient to establish grade and geological continuity and is appropriate for Mineral Resource and Ore Reserve estimation and the resource classifications applied.<br>• Samples from pegmatite rocks are collected every metre and are not composited into longer lengths. |
| **Orientation of data in relation to geological structure** | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>*If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | • Mineralised zones in the north-eastern domains are interpreted to dip moderately to the northeast. Drilling is generally oriented -60 degrees due west. Intersection angles on the mineralised zone are between 35 and 65 degrees depending on the local strike of the mineralised pegmatite. True widths of mineralisation are between about 75% and 40% of downhole widths.<br>• Mineralised zones in the Danaya resource area are hosted within intersecting dykes that are interpreted to dip towards the east-northeast. RC drilling does not allow orientations of contacts to be measured directly, but sufficient information is available from diamond drilling to measure the orientations of the major mineralised pegmatites. Drilling is generally oriented -60 degrees due west. Intersection angles on the mineralised zone are between 15 and 35 degrees depending on the strike of the mineralised pegmatite.<br>• The relationship between drilling orientation and structural orientation is not thought to have introduced a sampling bias. |
| **Sample security** | *The measures taken to ensure sample security.* | • Samples are delivered from the drilling site in batches of 300 to the SGS laboratory in Bamako or MSA LABS in Bougouni with appropriate paperwork to ensure the chain of custody is recorded. Prepared pulps are shipped by SGS using DHL from Bamako to their South African Randfontein facility. MSA Labs Pulps are shipped to Vancouver using DHL for assay determination. |
| **Audits or reviews** | *The results of any audits or reviews of sampling techniques and data.* | • QAQC checks of individual assay files are routinely made when the results are issued.<br>• QAQC reports are prepared monthly by LLLs database contractors. Any issues attributable to the assay laboratory e.g. Standards reporting out of specification, are queried with the laboratory directly. These queries have resulted in explanations being provided to LLL, and in various re-assaying campaigns by SGS to the satisfaction of LLL. |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| | | • QAQC reports are generated for the entire program at the end of the program, to support the resource estimate. |

## JORC 2012 Table 1 Section 2 – Reporting of Exploration Results

*(Criteria listed in the preceding section also apply to this section)*

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral tenement and land tenure status** | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>*The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | • The Goulamina Project is entirely within the Torakoro Exploitation Permit PE 19/25 in Mali , PE19/25 is 100% held by Lithium du Mali a 50-50 joint venture between Leo Lithium and Ganfeng. |
| **Exploration done by other parties** | *Acknowledgment and appraisal of exploration by other parties.* | • Lithium du Mali (formerly Firefinch, Mali Lithium and Birimian Gold) has completed substantial exploration in the area including soil sampling, Auger Drilling, Air-core Drilling, RC Drilling and diamond drilling. The current program was designed infill areas of broad spaced (100 m sections) drilling and extend the depth potential of the Goulamina deposit. |
| **Geology** | *Deposit type, geological setting and style of mineralisation.* | • The Pegmatites are Lithium-Caesium-Tantalum (LCT) type Spodumene bearing Pegmatites. The pegmatites are hosted entirely within granitic rocks. |
| **Drillhole information** | *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:*<br>• *easting and northing of the drillhole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar*<br>• *dip and azimuth of the hole*<br>• *downhole length and interception depth*<br>• *hole length.*<br>*If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | • Drilling completed by Birimian Gold in the period from 2015 to 2019 has been reported in various market updates on the Goulamina Lithium deposit which are available on the Leo Lithium web site.<br>• Drill hole collar information for mineralised intervals reported in this report are tabulated elsewhere. |
| **Data aggregation methods** | *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*<br>*Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>*The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • All RC sample lengths are 1 m. A weighting of 1 has been applied to all samples.<br>• Diamond core samples close to the contacts vary in sample length and a weighted average was used to calculate mineralisation intercepts.<br>• A 0.5% $Li_2O$ lower cut-off grade, and a maximum 6m internal waste is used in the calculations<br>• Top cuts have not been used.<br>• Metal equivalent grades have not been reported or used. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Relationship between mineralisation widths and intercept lengths** | *These relationships are particularly important in the reporting of Exploration Results.*<br>*If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.*<br>*If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').* | • In the northeast part of the deposit, five main north-northwest-south-southeast striking pegmatites are interpreted to dip moderately to the east-northeast. Drilling is generally oriented -60 degrees due west. Intersection angles on the northeast mineralised pegmatites vary between 35 and 75 degrees. True widths of mineralisation vary depending on the local strike and dip of the pegmatite.<br>• In the Danaya area, pegmatite dykes are variously oriented. Drilling is generally oriented -60 degrees due west, and in a few cases -70 degrees towards the east. The true width of intersections at Danaya is derived from the interpreted orientation of the pegmatites and the down hole width. |
| **Diagrams** | *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.* | • Appropriate maps and sections (with scales) and tabulations of intercepts are provided elsewhere in this report. |
| **Balanced reporting** | *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | • Reporting all assay results is not practical in this report. Intercepts that are not reported, can generally be assumed to be narrow (less than 10 m down hole), or contain insignificant or no spodumene mineralisation (less than 0.5% $Li_2O$). |
| **Other substantive exploration data** | *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • Other exploration information is not meaningful or material to this report or has been reported previously.<br>• All meaningful data relating to the Mineral Resource has been included. |
| **Further work** | *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>*Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Additional drilling is planned to extend and infill the existing Mineral Resource.<br>• Additional metallurgical test work is planned. |

## JORC 2012 Table 1 Section 3 – Estimation and Reporting of Mineral Resources

*(Criteria listed in the preceding section also apply to this section)*

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Database integrity** | Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.<br>Data validation procedures used. | • The drilling database is maintained by Leo Lithium's database consultant (Rock Solid Data Consultancy) using DataShed software. Look-up tables and fixed formatting are used for entering logging, spatial and sampling data for the deposit databases. Sample numbers are uniquely coded and pre-numbered bags are used. Lithology, collar and downhole survey, and sampling and assay data are transferred to the database consultant from Leo Lithium's offices in Mali electronically (via email).<br>• User access to the database is regulated by specific user permissions. Only the Database Administrator can overwrite data.<br>• All data has passed a validation process; any discrepancies have been checked by Leo Lithium personnel before being updated in the database.<br>• Data used in the MRE is sourced from a Microsoft Access database export. CSA Global imported the Microsoft Access database file into Surpac and Leapfrog Geo for validation and modelling.<br>• Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars.<br>• No significant validation errors were detected. |
| **Site visits** | Comment on any site visits undertaken by the Competent Person and the outcome of those visits.<br>If no site visits have been undertaken, indicate why this is the case. | • Local geology, and general site set-up as well as the sample preparation laboratory were observed on the first visit and drilling and sampling practices and procedures were reviewed while drilling was underway, on the second visit.<br>• The sample preparation laboratory was changed to SGS as it could offer pulverisers made of tungsten carbide, which result in lower iron contamination. The SGS laboratory sample preparation facility was observed to be clean, tidy, and well organised.<br>• Drilling and sampling practices were found to be industry standard, and no deleterious issues were noted.<br>• Site visits were made to the Project in November 2022, March 2023 and June 2023 during the resource drilling at Danaya by Sebastian Kneer (General Manager Geology & Exploration at Leo Lithium). Mr Kneer assumes Competent Person status for JORC Table 1 Sections 1 and 2 supporting the MRE. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • During the Project site visits the drilling, sampling, geological logging, density measurements and sample storage facilities, equipment and procedures were witnessed, and discussions held with Leo Lithium geologists and field staff. The facilities and equipment were appropriate, and the procedures were well designed and being implemented consistently.<br>• In the Competent Person's opinion, the geological and sampling data being produced is appropriate for use in an MRE. |
| **Geological interpretation** | Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.<br>Nature of the data used and of any assumptions made.<br>The effect, if any, of alternative interpretations on Mineral Resource estimation.<br>The use of geology in guiding and controlling the Mineral Resource estimate. The factors affecting continuity both in grade and geology. | • The geological interpretation within the northeast part of the resource encompassing the Main, West and Sangar pegmatites is considered robust.<br>• The geological confidence in the interpretation of Danaya has been increased by using optical and acoustic sounding techniques to measure the orientation of some of the geological contacts and foliations. The orientation and structural relationships of the dykes has been sufficiently resolved using available diamond drilling and structural measurements.<br>• Recent resource drilling campaign has confirmed the interpretation of these zones and shown they remain open to the northwest, southeast, and at depth.<br>• Diamond core and reverse circulation drill holes have been used in the MRE. Lithology, structure, alteration, and mineralisation data has been used to generate the mineralisation model. There is a strong correlation between pegmatites and lithium mineralisation. There is usually a sharp cut-off in mineralisation at the contact between the lithium-bearing pegmatites and the host granitic material. The boundaries of the pegmatites are in most cases used as a de facto grade boundary. In some instances, where it appears that the contact has not been interpreted correctly, possibly due to metasomatic or metamorphic alteration at the boundary, the grade boundary is based on a nominal 0.3% $Li_2O$ grade threshold.<br>• Weathering and laterisation processes have removed most of the $Li_2O$ from the pegmatites between the surface and the base of complete oxidation. No resources have been defined in the weathered part of the resource as this clay-rich material is deleterious to the process and cannot be economically beneficiated.<br>• The Competent Person, Mr Matt Clark is confident any alterative interpretations would result in globally immaterial differences in the MRE. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Dimensions** | The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource. | • The lithium is hosted within an overall 3.2 km long corridor of mineralised pegmatite which strikes NNW and has a width up to 1.5 km east-west. This includes the Danaya area with a strike of 1.6 km N-S, and width of 0.5 km east-west.<br>• The pegmatite dykes are moderate to steeply east dipping and have been intersected up to a depth of approximately 350 m below surface in the Northeast domain, and up to 300 m below surface at Danaya.<br>• The main pegmatite dykes have been interpreted up to 400 m below surface in the Northeast domain, and up to 250 m below surface at Danaya.<br>• The major pegmatite dykes range from 20 to 80 m true width, while the smaller dykes are typically between 2 to 20 m true width.<br>• Whilst continuous, the main pegmatite dykes appear to narrow at depth to the south. Mineralisation is exposed at surface in the central portion of the Main Zone. The remaining mineralisation domains including the in the Danaya area are buried below 10 to 70 m of laterite and weathered saprolite, and saprock. although in a few areas, deep watercourses appear to have preferentially eroded spodumene (and $Li_2O$) from the pegmatite host. |
| **Estimation and modelling techniques** | The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used.<br>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.<br>The assumptions made regarding recovery of by-products.<br>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).<br>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.<br>Any assumptions behind modelling of selective mining units.<br>Any assumptions about correlation between variables<br>Description of how the geological interpretation was used to control the resource estimates.<br>Discussion of basis for using or not using grade cutting or capping. | • Grade estimation of lithium has been completed using Ordinary Kriging (OK) into mineralised pegmatite domains using Surpac software. Variography has been undertaken on the grade domain composite data. Variogram orientations are largely controlled by the strike and dip of the mineralised pegmatites.<br>• Previous estimates are available for comparative analysis and have been used to inform the current Mineral Resource estimate.<br>• No assumptions have been made regarding recovery of any by-products.<br>• Iron is considered to be a deleterious element and was also estimated. Possible iron contamination exists due to the use of steel drill rods, and bits and steel milling equipment.<br>• The data spacing varies considerably within the deposit ranging from grade control drilling in the Main pegmatite at 12.5 m by 12.5 m spacing to nominal 25 m by 25 m and 50 m by 50 m resource drillhole spacing in the better-informed parts of the deposit. Exploration drill spacing on the peripheries of the pegmatites steps out to greater than 100 m by 50 m. A parent block size of 10 m(E) by 20 m(N) by 10 m(RL) with sub-celling to 1.25 m(E) by 2.5 m(N) by 1.25 m(RL) has been used to define the mineralisation, with the lithium estimate at the parent block scale. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available. | • Block modelling and grade estimation was carried out using Surpac software. Mineralisation domains were coded in the block model, along with oxidation domains, and lithology.<br>• The OK estimate was completed anisotropic search directions to enable a local search orientation based on the pegmatite trends. The estimation was completed using a 3-pass search strategy.<br>• Pass 1 estimation has been undertaken using a minimum of 16 or 18 samples and maximum of 34 or 40 samples for the major pegmatite domains, and minimum 10 and maximum of 26 samples for the minor pegmatite domains. The maximum search distance was set to two-thirds of the variogram range. Approximately 64% of the blocks were estimated in Pass 1.<br>• Pass 2 estimation has been undertaken using a minimum of 16 or 18 samples and maximum of 30 or 36 samples for the major pegmatite domains, and minimum 10 and maximum of 24 samples for the minor pegmatite domains. The maximum search distance was set to the full variogram range. Approximately 14% of the blocks were estimated in Pass 2.<br>• Pass 3 estimation has been undertaken using a minimum of 10 samples and maximum of 20 samples for all pegmatite domains. The maximum search distance was set to the five times the variogram range the fill the remaining blocks. A maximum of 5 samples was allowed from any individual drillhole. Approximately 22% of the blocks were estimated in Pass 2.<br>• No selective mining units were assumed in this estimate.<br>• Lithium ($Li_2O$) and iron oxide ($Fe_2O_3$) were estimated within the lithium mineralised pegmatites volumes. No correlation between variables has been assumed.<br>• The mineralisation and geological wireframes have been used to flag the drill hole intercepts in the drill hole assay file. The flagged intercepts have then been used to create 1 m length composites in Surpac.<br>• The influence of extreme sample distribution outliers in the composited data has been determined using a combination of histograms and log probability plots. It was decided that no top-cuts need to be applied.<br>• Model validation has been carried out, including visual comparison between composites and estimated blocks; check for negative or absent grades; statistical comparison against the input drill hole data and graphical plots. No mining has taken place and so no reconciliation data are available. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Moisture** | Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. | • Tonnages have been estimated on a dry, in situ, basis. |
| **Cut-off parameters** | The basis of the adopted cut-off grade(s) or quality parameters applied. | • For the reporting of the Mineral Resource Estimate, a 0.5% $Li_2O$ cut-off has been used. |
| **Mining factors or assumptions** | Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. | • Open cut mining using contract mining fleet and conventional drill and blast mining methods are envisaged in the DFS completed in 2020.<br>• An optimised pit shell (at US$1500/t of spodumene concentrate) was developed to determine the extent of resources that have reasonable prospects of eventual economic extraction.<br>• No assumptions regarding minimum mining widths and dilution have been made. |
| **Metallurgical factors or assumptions** | The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made. | • The Mineral Resource estimate is supported by metallurgical test work undertaken between 2017 and 2020, by ALS, Nagrom and others, reported to the ASX on 27 November 2019 (Goulamina Metallurgy Test Work Surpasses Expectations), 17 September 2019 (Excellent Metallurgical Test Work Results) and 4 July 2018 (Goulamina Updated PFS Delivers Strong Project Outcomes). The test work programs included comminution test work, mineralogy using QEMSCAN, reflux classification, heavy liquid separation and DMS test work, flotation, and magnetic separation test work. A process flowsheet was developed based on the metallurgical test work programs. These resulted in achieving an average of 86.1% $Li_2O$ recovery in flotation, and overall average recovery of 78.2% $Li_2O$, producing a high-quality chemical grade spodumene concentrate at >6% $Li_2O$. The results of the test work programs support the DFS released in 2020 and the DFS Update which was released in 2021. |
| **Environmental factors or assumptions** | Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered, this should be reported with an explanation of the environmental assumptions made. | • Environmental factors and assumptions have been studied as part of the Preliminary Feasibility Study (PFS) completed in 2019 and are reported there. |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| **Bulk density** | Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.<br>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.<br>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. | • Bulk density determination for unweathered pegmatite material is derived from an analysis of 1,342 dry density measurements of drill core from 87 diamond drill holes.<br>• Whole core was used, but neither coated nor waxed. The rock material is not generally porous and does not have visible voids. The application of wax or other coating would not have a significant impact on the estimated density of the Mineral Resource.<br>• Weathered material is not considered as part of this Mineral Resource estimate. Bulk density is assumed, based on data from other equivalent granite-hosted deposits.<br>• Density is assigned in the model according to weathering horizons and rock types.<br>• The average bulk density factors applied to the MRE is 2.73 t/m³ for fresh pegmatite, 2.65 t/m³ for fresh granite, and 2.50 t/m³ for tonnage estimate for pegmatite and waste material above the top of fresh rock surface. |
| **Classification** | The basis for the classification of the Mineral Resources into varying confidence categories.<br>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).<br>Whether the result appropriately reflects the Competent Person's view of the deposit. | • The resource classification has been applied to the Mineral Resource estimate based on the drilling data spacing, grade and geological continuity, and data integrity.<br>• The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1, Section 2 and Section 3 of this table.<br>• The Measured, Indicated, and Inferred classifications take into account the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity.<br>• Confidence in the Measured and Indicated Mineral Resources is sufficient to allow application of Modifying Factors within technical and economic studies.<br>• The Mineral Resource is classified as a Measured for those volumes where in the Competent Person's opinion there is sufficient confidence to allow the application of Modifying Factors. Measured Mineral Resources are reported for areas within the mineralised domains with 25 m by 25 m drill spacing or better.<br>• The Mineral Resource is classified as an Indicated Mineral Resource for those volumes where in the Competent Person's opinion there is adequately detailed and reliable, geological, and sampling evidence, which are sufficient to assume geological and mineralisation continuity. Indicated Mineral Resources are reported for areas within the mineralised domains with approximately 50 m by 50 m spacing. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • The Mineral Resource is classified as an Inferred where the model volumes are, in the Competent Person's opinion, considered to have more limited geological and sampling evidence, which are sufficient to imply but not verify geological and mineralisation continuity. Inferred Mineral Resources are reported for the periphery and depth extents of the major mineralisation domains and in smaller domains with limited samples. The Inferred classification generally represents areas with greater than 50 m by 50 m drillhole spacing.<br>• The MRE appropriately reflects the view of the Competent Person, Mr Matt Clark. |
| **Audits or reviews** | The results of any audits or reviews of Mineral Resource estimates. | • Internal audits and peer review were completed by CSA Global which verified and considered the technical inputs, methodology, parameters and results of the resource estimate.<br>• No external audits of the resource estimate have been undertaken. |
| **Discussion of relative accuracy/ confidence** | Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.<br>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.<br>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. | • The relative accuracy of this Mineral Resource estimate is reflected in the reporting of the estimate as Measured, Indicated and Inferred Mineral Resources as per the guidelines of the 2012 JORC Code.<br>• The Mineral Resource statement relates to global estimates of in situ tonnes and grade.<br>• The model should not be used as a grade control model without addition of pit floor mapping to assist with determining actual pegmatite contacts as opposed to interpreted ones.<br>• No mining has taken place at this deposit to allow reconciliation with production data. |