

# GOULAMINA PROJECT MID-TERM STATUS UPDATE

Mid-term review demonstrates project on track to deliver first spodumene by Q2, 2024. Ongoing optimisation work and improved cost visibility has resulted in an updated capital estimate reflecting DFS scope changes, which includes an accelerated mining ramp up, and industry-wide cost escalation to a lesser extent. Despite minor revisions, Leo Lithium remains a top tier, low-cost producer.

- Detailed engineering of Stage 1, design optimisation, additional scope and industry wide inflationary pressures have resulted in a US\$30 million increase in the 2021 DFS capital cost estimate from US\$255 million to US\$285 million (a 12% increase).
- The costs for the Operational Readiness Phase are estimated at US\$33 million and cover the accelerated ramp up of mining and plant commissioning activities.
- The combined impact of the revised capital cost estimate and the inclusion of costs for the Operational Readiness Phase brings total capital expenditure from FID to first production to US\$318 million.
- Project schedule review completed, and mine plan for the first two years of operations finalised. 90% of contracts awarded or under negotiation, securing much of the supply and construction costs.
- Project remains on track for first spodumene production in Q2 2024, and early revenue opportunity from Direct Shipped Ore (DSO) confirmed at an expanded 185,000 tonnes, providing significant additional early funding: first DSO shipments are planned for Q4 2023.
- The Goulamina Project is one of the largest and lowest capital intensity lithium spodumene projects globally with a Stage 1 capacity of 506,000 dry tonnes per annum at a capital intensity of US\$580/tonne SC6 capacity based on the revised capital cost estimate of US\$285 million which confirms Goulamina as a globally competitive, emerging spodumene producer.

Leo Lithium Limited (ASX: LLL) (Leo Lithium or the Company) announces a project update on development progress at the Goulamina Lithium Project (Goulamina or the Project) in Mali. Goulamina is a Joint Venture between Leo Lithium (50%) and Ganfeng Lithium Group (50%) (Goulamina JV).



### **Project Update**

After declaring a Final Investment Decision (FID) in January 2022, Leo Lithium commenced detailed design, procurement, and construction activities at Goulamina in February 2022 and the Project is now approximately 20% completed. The Company has made good progress and despite schedule pressure along the supply chain, remains on plan to deliver first spodumene concentrate product from the process plant in Q2 2024.

The site offices, temporary accommodation facility, bulk earthworks, foundations for the mill area and crusher are now either substantially complete or well underway. Site works are continuing with the construction of the tailings storage facility, waste management facility, ROM pad and concrete works for other infrastructure and the services / earthworks for the permanent camp.

Furthermore, substantial progress has been made with 90% of construction package contracts by value already tendered and under negotiation or awarded, effectively locking in much of the supply and construction costs. Major site-based contracts already granted include bulk earthworks, concrete, mechanical installation and fuel supply. Equipment supply and fabrication for structural steel, platework, pumps, bulk electrical and switch rooms have been awarded. The mining contractor and power supplier tenders are currently being assessed and it is expected that by the end of Q2, 2023, substantially all of the remaining contracts would have been awarded.

Fabrication of long-lead items such as the ball mill, crushers, grizzly and magnetic separators is now complete, and these items should arrive in Mali commencing this month. The apron feeder, thickeners, flotation cells and other equipment will be delivered in Q3 2023 ready for installation in Q4 2023.

### **Revised Capital Cost**

As the Project is now more than 50% of the way through the 27-month construction phase, the Company has significantly progressed the Project since the completion of the DFS in December 2021. The forecast cost to complete the construction of the Project has increased by US\$5 million (a 2% increase) above the DFS capital cost estimate of US\$255 million (including contingency of US\$28 million) due to optimisation of plant design (increasing plant performance, enabling quicker future expansion – Stage 2 costs), scope changes (additional earthworks around the plant, airstrip and increased security) and industry wide inflationary pressure (fuel and equipment supply costs). Also, taxes and duties are now included in the forecast costs (recognised at the time of DFS but excluded from the budget).

Given that construction of the Project still has a further 12 months to run, additional contingency of US\$25 million has also been included in the capital costs resulting in an overall increase in capital costs of US\$30 million to US\$285 million (a 12% increase).

In addition, as the Project increases the construction activities, the Company has costed new plans associated with the Operational Readiness Phase. The Operational Readiness Phase is focused on workforce readiness, the ramp up of mining activities, and the commencement of plant commissioning activities to produce first spodumene. This Phase is now expected to cost an additional US\$33 million and is driven by a more comprehensive costed plan for commissioning spodumene production in Mali. When combined with the revised cost to complete of US\$285 million, the total project capital from FID to first production in Q2, 2024 is expected to be US\$318 million.



### **Revised Construction Cost Estimate**

The revised construction cost is a result of the optimisation of plant design, scope changes and industry wide cost pressures. These are described in further detail below:

• Optimisation of Stage 1 Plant Design to increase plant performance and prepare for Stage 2: In readiness for Stage 2, the crushing capacity in Stage 1 has been increased from 2.3Mtpa to 4Mtpa. Milling capacity has been increased from 2.3Mtpa to 2.5Mtpa, a 9% increase.

Current study outcomes confirm the crushing circuit and conveyors will not require further upgrades as primary, secondary crushing and screening have been designed into Stage 1.

- Scope changes due to project optimisation and preparation for Stage 2 include:
  - Increased earthworks in the plant areas to accommodate Stage 2 construction.
  - Increased mine workshops, changerooms and administration facilities.
  - Design, construction and approvals for an airstrip to support more efficient and safer access to site during operations (removing road transport of staff).
  - Increasing security measures including the addition of additional guards and security related installation.
- Industry wide cost pressures: Whilst the Company has mitigated part of its exposure to industry cost pressures by locking in ~90% of contracts and procurement for the construction by value, moderate inflationary pressures have been felt in pumps, pipes, fuel and steel supply. Additionally, some fabricators have flagged capacity pressures resulting in an additional allowance for quality assurance and site inspection costs to ensure supply schedules can be achieved. With a further 12 months of construction activities, the Company believes it is prudent to increase the contingency by US\$25 million to allow for general industry cost pressures.

#### **Operational Readiness Cost Estimate**

The Operational Readiness Phase is focused on the integration of both "Mine to Mill" as well as plant commissioning to operational stability. Detailed mine planning was undertaken in 2022 to expand the DFS quarterly mining estimates to monthly production data incorporating all mine related activities. This data formed the basis of the mining contract and explosives tenders which are close to award. As such, the material movement has been refined to achieve a practical ramp up in material movement reflecting preceding activities as to when fleet becomes available. As the mine operational costs incorporate the schedule of rates from the preferred tenderers, it gives higher confidence in expected costs to first production.

The operational readiness cost estimate consists of the following:

Mining ramp up costs and technical services: Nominal allowances were made at the time
of the DFS that were based on preliminary mine designs with nominal technical detail
assumed to be required prior to operations. The cost now includes contractor mining costs
for related mining activities, including drill and blast, excavating, loading and hauling and
pre-striping of waste to expose sufficient ore prior to commencement of processing.

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Technical services cover geotechnical, hydrogeology and other technical services required prior to commencement of operations.

- Processing plant commissioning cost: Nominal allowances were made at the time of the
  DFS based on preliminary estimates of the operational team and fuel costs that are now
  known to be higher than the DFS. The cost now includes power related costs,
  consumables, general plant maintenance and costs associated with setting up other nonprocess infrastructure such as roads and equipment.
- Costs associated with building an operating workforce in Mali: At the time of the DFS
  no budget consideration was made for the recruitment, training and additional on-costs
  of building an operational workforce ready to commission a new plant. This is the
  recruitment, training, development and building of a permanent operating team in Mali to
  cover mining, processing, maintenance, logistics, finance, and administration and ESG
  activities with local communities.

### Project schedule

Leo Lithium and EPCM contractor Lycopodium have completed a mid-term project schedule review and the Project remains on track for the commencement of operations in Q2, 2024. This review was planned to coincide with the pending completion of construction procurement activities and the receival of baseline schedule details from vendors. While market supply pressures are evident in many parts of the value chain, the long lead items and primary critical path packages are locked in, e.g. fabrication of crushing and grinding equipment is complete and is being shipped to Mali. The focus is now on expediting of fabrication and supply, for new packages approaching the critical path. A dedicated approach to expediting equipment supply during fabrication, along with potential improvement in transport and logistics assumptions (based on early shipment times, customs clearances, and transit times) remains a schedule compression opportunity, as does airfreight for applicable items. Reported project progress is 20% complete, although this is expected to increase this month after Project personnel complete inspections of progress at steel and platework vendor facilities.

Site management continues to optimise activities to ensure a suitable number of work fronts will be ready for arriving steel to immediately commence being installed. This will be made possible by the pending mobilisation of the mechanical installation contractor. Mechanical construction and electrical installation will continue during the second half of 2023. Mining activities will commence in May 2023 and will supply ore for DSO and the stockpile build ahead of plant commissioning.

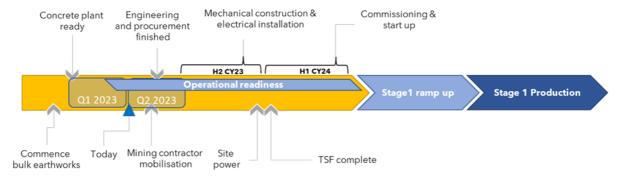


Figure 1: High-level Project schedule

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It is expected that by the end of May 2023, the construction management team will have completed a detailed review of plans based on the productivity of existing contractors and supply vendors, with proposed delivery plans also available for the mechanical and electrical installation contractors. Mitigating actions of increased resources, night shifts, airfreight etc would only then be implemented if necessary.

#### **Direct Shipped Ore**

Refinement of the initial mine plan reveals that 185,000 tonnes of ore are surplus to the initial commissioning and ramp up needs of the processing plant. This ore will be available for DSO sales in 2023 and H1 2024. The first shipment is scheduled for Q4 2023 with an upside case of late Q3. In total, 60,000 to 90,000 tonnes of shipments are planned for 2023 with the remaining DSO planned to be shipped in H1 2024. Should the plant commissioning be pushed out, additional ore will become surplus to requirements and available for DSO sales.

Key activities to initiate DSO production include appointing the mining, explosives supply and trucking contractors and minor site approvals. The preferred mining contractor has been issued an early engagement notice and mobilisation of equipment has commenced. The preferred explosives contractor has been selected and consumables are expected to be transported to site from nearby production facilities at other mining sites. Logistics planning is advancing positively with road conditions found to be in better condition than expected and potential means to improve trucking payloads and cycle times identified (see ASX announcement of 5 April 2023).

JV Partner Ganfeng has expressed significant interest to purchase the product. DSO is not covered in the spodumene offtake agreement with Ganfeng and pricing discussions have commenced and are at an early stage. Some DSO parcels may also be offered to third parties. Grade control drilling has been completed at the initial DSO pit area and results are due this quarter. Early indications based on the Resource model are that the DSO is expected to be high grade, in the range of 1.4-1.7 %  $\text{Li}_2\text{O}$ , enabling optimal pricing outcomes.

# Leo Lithium Managing Director, Simon Hay, commented:

"After conducting a thorough review of the project's capital costs, expected capital increases were identified due to market conditions and an accelerated mining ramp-up. These include optimising the Stage 1 plant design to enhance the plant's performance, making necessary scope changes for Stage 2 and responding to industry-wide inflationary pressures.

Despite these cost changes, Leo Lithium remains extremely well positioned to take advantage of high spodumene prices in the next 3 to 5 years. Notwithstanding inflationary pressures and shortages along the supply chain, the project is progressing as planned, with engineering and procurement nearing completion, on-site construction activities ramping up, and mining activities set to begin next month.

Looking ahead, we are encouraged to see early revenue from the targeted export of Direct Shipped Ore by Q4 2023, further demonstrating our commitment to delivering value as a top-tier, low-cost producer. We appreciate our shareholders' continued support and look forward to delivering on our strategy and becoming West Africa's first lithium producer."

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



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**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<sup>1</sup>, 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.

Large scale, high grade orebody: World-class, high grade hard rock lithium deposit with a Mineral Resource of 142.3Mt at 1.38%  $\text{Li}_2\text{O}$  and Ore Reserve of 52Mt at 1.51%  $\text{Li}_2\text{O}$  (1.9Mt LCE). Drilling is underway targeting increases to the current resources and reserves.

**Quality product**: High quality spodumene concentrate with test work validating  $6\% \text{ Li}_2\text{O}$  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.

#### Ore Reserves, Mineral Resources and Production Targets

The information in this announcement that relates to production targets and Ore Reserves is extracted from the Company's replacement prospectus dated 6 May 2022 (Prospectus) which is available at leolithium.com. The information in relation to Mineral Resources is extracted from the ASX announcement dated 17 January 2023 (Announcement). The Company confirms that all material assumptions and technical parameters underpinning the production targets, Mineral Resources and Ore Reserve estimates in the Prospectus and Announcement 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 or Announcement.

<sup>1.</sup> Based on first 5 years of steady state Stage 2 production.