

ASX Announcement

ASX BGS

4 July 2018

GOULAMINA UPDATED PRE-FEASIBILITY STUDY DELIVERS STRONG PROJECT OUTCOMES

HIGHLIGHTS:

- PFS update confirms that Goulamina can be profitably developed as a large scale, low cost, hard rock lithium mine and recommends progression to a Feasibility Study
- Annual concentrate production: 362,000tpa of 6% Li₂O spodumene concentrate
- Strong financial outcomes forecast including:
 - Pre-tax NPV₁₀ of A\$920M (US\$690M)
 - o Pre-tax IRR (real) of 49.5%
- Forecast to generate strong earnings and cashflow over a 16-year¹ operating life:
 - LOM project EBITDA (real) of A\$2,691M (US\$2,018M), which translates to average annual EBITDA of \$171M (US\$128M)
 - LOM net cash flow from operations (pre-tax, real) of A\$2,359M (US\$1,769M), which translates to average annual net cash flow from operations of \$150M (US\$112M)
- Long mine life with strong potential for extension through exploration upside
- Average LOM operating cash cost (Brook Hunt C1) of A\$374/t (US\$281/t)
- Short payback period of 2.6 years, including production ramp-up period
- Numerous opportunities to further enhance value during Feasibility Study optimisation

Birimian Limited (ASX: BGS; Birimian or the Company) is pleased to announce the completion of an updated Pre-Feasibility Study² (PFS) for the Company's wholly-owned Goulamina Lithium Project (Goulamina or the Project) located in southern Mali, the results of which demonstrate excellent project economics and significant potential for further upside.

All material assumptions on which the production target and forecast financial information included in this announcement are based are set out in the information that follows.

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¹ Subject to rounding.

² This pre-feasibility study is an update of the earlier Goulamina pre-feasibility study released in October 2017 (*BGS*, *4 October 2017*) following further work by the Company.



Key PFS Outcomes

The PFS update, prepared by Ausenco Services Pty Ltd (**Ausenco**), confirms that Goulamina can be profitably developed as a large scale, low cost, hard rock lithium mine. The recommended development scenario comprises an open cut mining operation and a 2Mtpa mineral concentrating plant. Under this scenario, Goulamina would produce an average of 362,000t of 6% Li₂O spodumene concentrate (**Concentrate**), or 53,704t of Lithium Carbonate Equivalent (**LCE**) annually, for the initial mine life of 16 years. Projected C1 costs (Brook Hunt) are A\$374/t (US\$281/t) of Concentrate produced, generating average annual EBITDA of A\$171M (US\$128M) and a 49.5% internal rate of return (**IRR**: pre-tax, real).

This PFS follows an earlier Goulamina pre-feasibility study released in October 2017 (*BGS*, 4 October 2017). Subsequently, the Company advised that it would undertake further work to produce an updated PFS with a firm development recommendation, based on improved Project economics. Specific objectives were to:

- increase the overall Mineral Resources available to the Project to ensure a minimum LOM of 20 years at a 2Mtpa treatment rate and which could be scaled to higher production rates, as required;
- declare a maiden Ore Reserve; and
- reduce operating costs to less than US\$300/t of Concentrate.

The PFS demonstrates that a 2Mtpa Project is feasible and can be developed to meet these objectives, as follows:

- the Ore Reserve will support a projected initial LOM of 16 years providing a sound foundation for the commencement of the Project, with substantial Inferred Mineral Resources which are expected to potentially further extend LOM;
- a maiden Ore Reserve of 31.2Mt @ 1.56% Li₂O, as released concurrently with this announcement (*BGS, 4 July 2018 see Appendix 2 'Previously reported information'*); and
- C1 operating costs are forecast at US\$281/t Concentrate, FOB Port of Abidjan, Ivory Coast among the world's lowest for a hard-rock lithium mine.

Operational Basis

The PFS confirms that the recommended development scenario for the Project is a 2Mtpa open cut mining operation using contract mining services. Annual production is estimated to average 362,000t of Concentrate for the LOM. Other operational details are included in Table 1 below:

Table 1: Project Operational Summary

Operating Outcomes	PFS
Total Ore Reserve	31.2Mt
Average LOM head grade	1.56% Li₂O
Initial mine operating life	16 Years
Processing capacity	2Mtpa
Average Concentrate production	362,000 tpa
Total Concentrate production (LOM)	5.7Mt
LOM metallurgical recovery (avg.)	70.4%
Waste to ore ratio (avg. LOM)	3.5:1



Financial Outcomes

The financial model, the outcomes of which are detailed in Table 2, is based on revenues derived from sales of a combined Dense Media Separation (**DMS**) and flotation concentrate. It is assumed that all Concentrate will be 100% payable and priced on a contractual basis with the average real price achieved LOM anticipated to be A\$888/t (US\$666/t) FOB Abidjan. The figures in Table 2 demonstrate that the Project offers very robust financial returns.

Table 2: Project Financial Summary

Financial Outcomes	A\$ M	US\$ M
NPV ₁₀ (pre-tax)	920	690
NPV ₁₀ (post-tax)	653	490
Total Net Cashflow Pre-tax (undiscounted)	2,359	1,769
Total Net Cashflow Post-tax	1,760	1,320
Pre-Tax IRR (real)	49.5%	49.5%
LOM Project Revenue (real)	5,062	3,796
LOM Operating Costs (real)	2,371	1,778
LOM Project EBITDA (real)	2,691	2,018
EBITDA (LOM avg annual, real)	171	128
Total Project Construction Capex	196	147
Other Capital Costs	25	19
Contingencies (23% of construction capex)	45	33
Concentrate Price (FOB, real)	888/t	666/t
C1 Cash Cost (LOM, real)	374/t	281/t
All-in Sustaining Cost (LOM, real)	425/t	319/t

Birimian intends undertaking infill and extension drilling later this year aimed at increasing the Project's Ore Reserves and will also carry out further resource extension and definition drilling of the Company's other identified pegmatite systems at Goulamina (see Figure 1). The Company is confident that it can achieve significant increases to the Project's current Mineral Resource base.



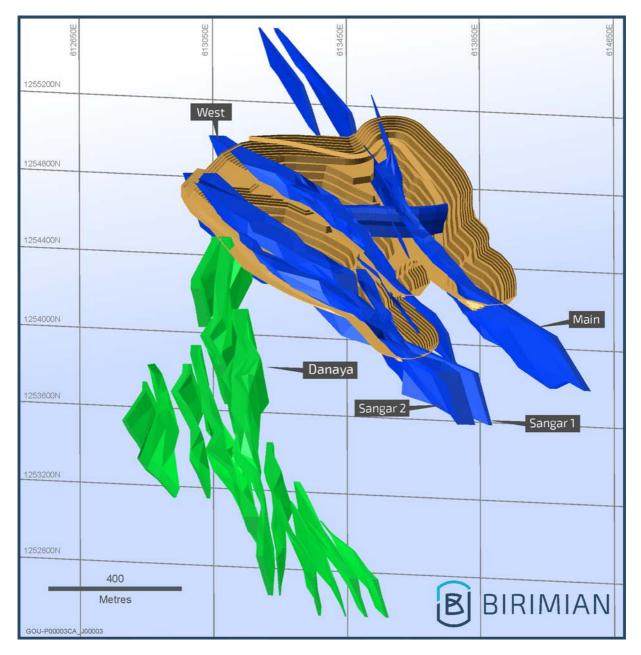


Figure 1: Goulamina PFS Open Pit Plan and Identified Mineral Resources Outlines

CEO comment

Birimian's Executive Director and Chief Executive Officer, Mr Greg Walker, described the release of the PFS results as an excellent achievement for Birimian. "The outstanding financial projections for the Project, together with the high-grade deposits amenable to low-cost and straightforward mining, establishes Goulamina as an exceptional lithium project of global significance. A maiden Ore Reserve of 31.2Mt confirms Goulamina's capacity to support a 2Mtpa processing plant for an initial mine-life of 16 years in the first phase of the Project's development. The recent Mineral Resource upgrade further enhances the Project's Mineral Resource inventory and offers the opportunity to extend LOM. In addition, our continued commitment to exploration offers the potential for further upside.

"I am particularly pleased that the objectives we set for this PFS process have been so successfully achieved. Our ability to satisfy the long-term requirements of strategic offtake partners is now clearly demonstrated." he said.



PFS Overview

Ausenco were the lead contractors for the completion of the PFS and had responsibility for final report compilation and generation. Ausenco also undertook process plant and infrastructure designs and the development of associated capital and operating cost estimates. Other specialist roles required for the PFS schedule were fulfilled by competent contractors, sub-contractors and specialists as required and generally engaged directly by Birimian. These contractors, sub-contractors and specialists, along with their principal contribution are listed in Section 16.

1. Goulamina

Location

Goulamina is located on the Torakoro Permit, which covers an area of 100km² and is located in southern Mali, approximately 150km south of the country's capital city of Bamako and 50km west of the town of Bougouni (refer to Figure 2). The Torakoro Permit is in good standing.



Figure 2: Goulamina Project Location Plan and PFS Road Transport Routes .

Lithium Occurrence

The deposit is hosted in a series of near-vertical spodumene-rich pegmatites, trending approximately north-north-west and measuring up to 70m in true width. The pegmatite system dips steeply to the south-east and occur extensively, having so far been identified over a length of greater than 2.5 km and occurring over width of more than 1.4 km. The Ore Reserve is located in the northern sector of the known mineralisation and is over 1.4 km long and 1 km wide. It covers the Main, West and Sangar Ore Zones.



2. Mineral Resource

On 29 June 2018, the Company reported an additional Inferred Mineral Resource (*BGS*,29 June 2018 – see Appendix 2 'Previously reported information') estimated for the Danaya pegmatites. The overall JORC Code (2012) compliant Indicated and Inferred Mineral Resource base, including the Mineral Resources identified previously (*BGS*, 27 April 2018), is outlined in Table 3 below and was prepared by Mr Matt Bampton, Principal Consulting Geologist, Cube Consulting Pty Ltd (**Cube**), who is a Competent Person.

Table 3: Mineral Resource June 2018 JORC Code (2012)

Goulamina Resource June 2018 – Split by Category					
Category	Domain	Tonnes (Mt)	Li ₂ O (%)	Li ₂ O (Mt)	Fe ₂ O ₃
INDICATED	Main	12.2	1.24	0.15	0.96
	West	11.5	1.54	0.18	1.07
	Sangar I	13.8	1.64	0.23	1.03
	Sangar II	6.2	1.47	0.09	1.05
	West II	-	0.00	-	0.00
INDICATED SUB-TOTAL		43.7	1.48	0.65	1.03
INFERRED	Main	3.3	0.91	0.03	1.05
	West	3.7	1.29	0.05	0.92
	Sangar I	10.1	1.53	0.15	1.00
	Sangar II	3.7	1.27	0.05	1.09
	West II	0.5	1.10	0.01	1.30
	Danaya	38.2	1.14	0.45	1.06
INFERRED SUB-TOTAL		59.5	1.21	0.74	1.05
TOTAL RESOURCE		103.2	1.34	1.39	1.04

Note: May contain apparent errors of summation due to rounding.

3. Ore Reserve

As part of the PFS program, Mr Quinton de Klerk, (Director – Mining Engineering, Cube), as Competent Person prepared the maiden Ore Reserve in accordance with the requirements of the JORC Code (2012 edition) and this Ore Reserve is shown in Table 4.

All material included in this Ore Reserve is in the Probable category. Accordingly, the PFS and guidance provided in this announcement do not rely on Inferred Mineral Resources. The Ore Reserve was developed assuming a whole-of-ore mining methodology, resulting in 2% of available ore being rejected to waste from the contact zone between ore and waste.

Table 4: Maiden Ore Reserve Statement JORC Code (2012)

Category	Cut-off Li₂O%	Tonnes (M)	Li₂O%	Fe ₂ O ₃ %	Li₂O Tonnes
Probable	0.00%	31.2	1.56	1.03	486,000

Note: This Ore Reserve and all associated modifying factors are detailed in the release issued simultaneously by the Company with this release (*BGS*, 4 July 2018 – see Appendix 2 'Previously reported information').



4. Mining

The mining technique will consist of conventional open pit mining (see Figure 3), with abstraction through conventional load and haul using standard mining equipment. Mining is required to deliver a notional 2 Mtpa of ore as feed to the processing plant. The total quantities of materials to be mined from the open pits are:

- 31.2Mt of spodumene-bearing ore at 1.56% Li₂O head grade.
- 109.1Mt of waste material.
- 140.3Mt of total material.
- Ore:waste ratio of 1:3.5 LOM.

The mining operation will be conducted on a seven day per week, 24 hour per day basis. Each day will comprise 3 x 8 hour shifts to comply with Malian labour law. The operation will deliver ore to a ROM pad and waste to a single large dump from the open pits.

Water, power and telecommunications are delivered to the mining operations from infrastructure developed elsewhere on site.

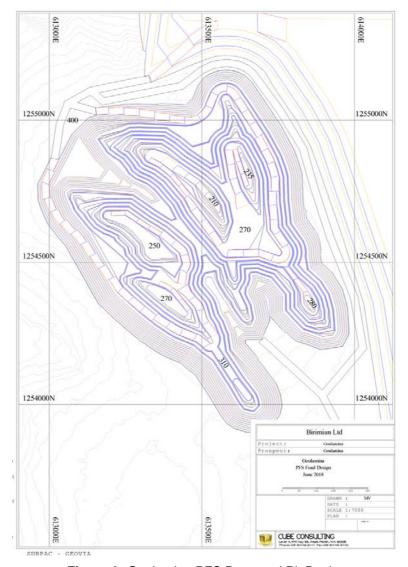


Figure 3: Goulamina PFS Proposed Pit Design



All material will require drilling and blasting, with costs for bulk explosives and blasting accessories based on budget quotes from two established explosives supply companies operating in the region.

Road and running surface maintenance is not expected to be onerous, since much of the running will be on firm floors. Maintaining these surfaces will be possible with planning and management. This is considered to be a compact site with a relatively small fleet required.

Ore will be delivered from the open pit to stockpiles on the ROM pad. This ore will then be rehandled for mill feed using a front-end loader for delivery into the processing plant feed hopper. Mill feed operations will be available 7 days per week, 24 hours per day, with a feed rate of up to 400 tph. Open pit mining to be implemented at the Project will be undertaken by a contract mine services provider.

5. Metallurgy

The metallurgical process proposed for Goulamina is a conventional process for the beneficiation of spodumenecontaining ores to saleable spodumene concentrates.

The process is well tested and involves crushing, reflux classification, DMS, grinding, flotation, magnetic separation, flotation concentrate filtration and bulk transport to the consumer, of a combined DMS/flotation Concentrate. Likely target markets for the Concentrate produced at Goulamina are lithium battery chemical manufacturers servicing the Electric Vehicle (**EV**) market and other lithium battery uses, such as residential and industrial solar energy storage systems.

Metallurgical testwork has been conducted on 32 composite samples. These composites were developed to represent the spatial variability of the ore across the three known ore zones (Main, West and Sangar) and biased toward the first three years of anticipated ore supply. They were tested against the flowsheet developed for the pre-feasibility study released by the Company on 4 September 2017 (*BGS*; 4 Sep 2017) and outlined above.

Metallurgical performance of the ore and process flowsheet were not optimised during the metallurgical testwork program and optimisation of both remains a task for any future work.

The testwork program was conducted by Nagrom & Company (**Nagrom**) in Kelmscott, Western Australia, and ALS Metallurgy Pty Ltd (**ALS**) in Balcatta, Western Australia, under the supervision of Birimian. Nagrom performed RC and mica removal testwork (including mica picking) and ALS completed the remainder of the testwork program.

The program included: mineralogy; comminution parameters; feed analysis; mineral beneficiation (HLS, milling and flotation) and tailings characterisation.

Overall product grade and recovery determined in the testwork are 5.9% Li₂O and 70.4%, respectively.

Based upon preliminary additional testwork, it is considered that optimisation of the flowsheet and conditions during any future FS testwork program will be able to increase the Li₂O grade above 6%, while maintaining or increasing overall recovery.

Testwork indicated Concentrate iron levels of 1.35% Fe₂O₃, which are at the high end of the generally accepted range. Birimian is aware that the current indicated required product specification for the target market to avoid penalties is a maximum of 1.4% Fe₂O₃ in concentrate. Further metallurgical testwork and investigation into Concentrate iron levels will be undertaken and it is believed that a material reduction in these levels can be achieved at the same or higher metallurgical recovery.

Additional metallurgical testwork in the areas of crush size, grind size and flotation performance has indicated that overall process recovery may be materially improved, however insufficient work has been undertaken to-date to enable such data to be incorporated into the PFS outcomes. Future testwork will aim to both improve and optimise the metallurgical design criteria to achieve both higher overall recoveries and Concentrate grades.



6. Processing

Processing will be through a conventional spodumene beneficiation plant (as shown in Figure 4) that incorporates crushing, reflux classification, dense media separation, milling, flotation, concentrate handling and tailings disposal.

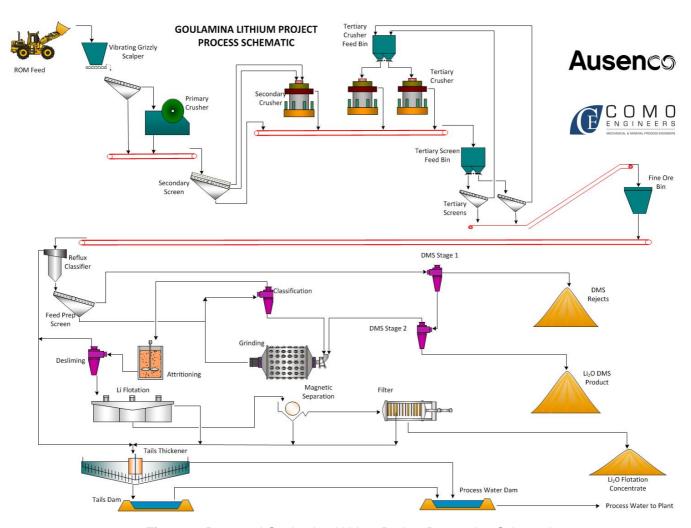


Figure 4: Proposed Goulamina Lithium Project Processing Schematic

Ore is loaded to the ROM bin by front end loader and is passed through a grizzly to remove oversize lumps. It is fed from the ROM bin by an apron feeder to a vibrating grizzly. Vibrating grizzly undersize goes to the primary crusher discharge conveyor. Vibrating grizzly oversize goes to the primary jaw crusher. Jaw crusher product is directed to the primary crusher discharge conveyor which transfers the crushed ROM to the secondary screen. The secondary screen oversize is transferred to the secondary crusher. Secondary screen undersize is directed to the secondary/tertiary discharge conveyor which directs crushed material to the tertiary screen feed bin. The tertiary screen feed bin directs material to two tertiary screens and the oversize from these screens is directed to the tertiary crusher feed bin which directs feed to the tertiary crushers. The product of the tertiary crushers is directed to the secondary/tertiary discharge conveyor and thence to the tertiary screen feed. Screen undersize from the tertiary screens is final crusher product, which is 100% passing 5mm and goes via the fine ore conveyor to the fine ore storage bin.

Fine ore is discharged from the fine ore storage bin and onto the reflux classifier. Reflux classifier overflow is directed to the mica removal screen where coarse mica is removed as a final tail to screen oversize. The mica removal screen undersize is pumped with Reflux classifier underflow to the feed prep screen. The feed prep screen underflow is directed



to the ball mill discharge hopper. The feed prep screen overflow goes to DMS stage 1. DMS stage 1 floats are combined with the mica removal screen oversize and disposed of via truck in the waste rock dump. DMS stage 1 sinks are sent to DMS stage 2 feed. DMS stage 2 sinks are directed to DMS concentrate storage at 5% (nominal) moisture. DMS stage 2 floats are directed to the ball mill feed. The ball mill discharge flows to the ball mill discharge hopper. Mineral slurry from the ball mill discharge hopper is pumped to the ball mill classifying cyclones. Cyclone overflow (P80 106 µm) goes to attritioner feed and cyclone underflow recirculates to ball mill feed. Attritioner discharge is pumped to the desliming cyclones and cyclone overflow (slimes at minus 20 micron) goes to the tailings thickener. Desliming cyclone underflow is directed to flotation as flotation feed. Flotation consists of two stages of rougher, 3 stages of cleaning and one cleaner scavenger. Combined flotation tailings are directed to the tailings thickener and combined flotation concentrate is filtered and sent to flotation concentrate storage at 7% (nominal) moisture.

The DMS concentrate and flotation concentrates are blended to maintain Concentrate specification, loaded to specialist truck trailers by front end loader and transported by road to the Port of Abidjan in the Ivory Coast, where they are loaded to ship in bulk for transport to the customer.

Tailings thickener overflow is directed to the process water pond for re-use in the processing plant and tailings thickener underflow is pumped to disposal in the Tailings Storage Facility (**TSF**). The TSF is fitted with a surface water decant system and water recovered by this system is also directed to the process water pond for re-use in the process plant. Make-up water to the process water pond is supplied from the raw water dam.

7. Capital Costs and Schedule

A simplified Project schedule has been developed and has been used as the basis for the financial model. The schedule incorporates the following key elements that influence the financial model:

- end of plant commissioning and commencement of production by March 2020;
- commencement of pre-production mining activities, including the establishment of a three-month ore stockpile, six months prior to commencement of production;
- commencement of operational staff employment and training, nine months prior to commencement of operations;
- construction period of 15 months;
- commissioning period of three months; and
- operating ramp to full production completed within three months of the commencement of operations.

Pre-production Capital Costs

The pre-production capital cost (**Capex**) estimate has been completed by Ausenco, with input from suitably qualified contractors and sub-contractors as required. The estimate is determined to have an accuracy of ±25%.

Total Capex for the Project is estimated at A\$266M (US\$199M), which consists of A\$196M (US\$147M) for plant construction and infrastructure, A\$26M (US\$19M) for mine development and owner's costs and A\$44M (US\$33M) in total contingency and accuracy provisions (**Contingency**) (23%).

The mining capital estimate was completed by Majesso Consulting Pty Ltd (**Majesso**), based on a Request for Quotation (**RFQ**), focussed on the mine development schedule described above. An appropriate contractor response to this RFQ was then selected.

The construction capital estimate was completed by Ausenco and is based upon supplier quotes for major equipment items and factored estimates utilising Ausenco's in-house cost database. Contingency (23%) has been applied only to this component of the capital cost estimate.



The process plant design on which the capital cost has been developed allows for plant throughput to be at least doubled in the future without material compromise to process or operating cost efficiencies.

The mine development and owners' cost capital estimate was derived in two parts. Majesso developed the preproduction mining cost, which includes the fleet mobilisation, mining infrastructure and mining operations sufficient to establish a ROM stockpile inventory able to provide three months' operating life. Majesso and Birimian jointly developed the costs associated with the pre-production owner's costs, which include initial staff establishment and pre-production training required to ensure efficient Project start-up, as well as consumable, accommodation and vehicle costs associated with this.

The capital cost distribution is depicted graphically in Figure 5 and broken down in Table 5 below.

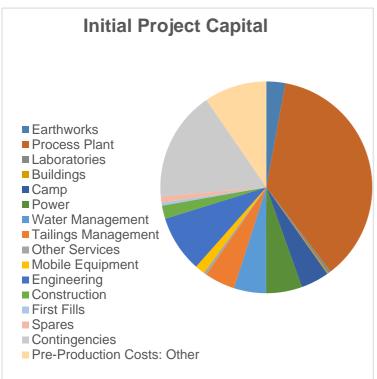


Figure 5: Capital Cost Distribution

Table 5: Capital Cost Breakdown

Initial Capital	U\$ M	A\$ M
Earthworks	5.8	7.7
Process Plant	73.2	97.6
Laboratories	0.9	1.2
Buildings	0.3	0.4
Camp	8.6	11.5
Power	11.0	14.7
Water Management	9.7	13.0
Tailings Management	9.2	12.3
Other Services	0.9	1.2
Mobile Equipment	3.0	4.0
Engineering	17.3	23.0
Construction	4.0	5.4
First Fills	0.9	1.2
Spares	2.0	2.6
Initial Capital Costs		
(excluding contingencies)	146.8	195.7
Contingencies (23%)	33.5	44.6
Initial Capital Costs		
(including contingencies)	180.2	240.3
Pre-Production Costs: Other	19.1	25.4
Total Initial Capital and		
Pre-Production Costs	199.3	265.7

The capital cost estimate for the PFS is materially higher than the estimate provided in the October 2017 pre-feasibility study (*BGS*, 04 Oct 2017). Analysis of the increase indicates that it is concentrated in three key areas:

- 1. Contingency, with the PFS allowing 23% against 15% originally;
- 2. Infrastructure and services, due to positive scope changes, as well as some original underestimates; and
- 3. Plant equipment changes, brought about by variations in metallurgical results, amending the required equipment specifications.



8. Operating Costs

Mine operating costs were developed by Majesso, based on supplier quotations and fuel costs supplied by Birimian (existing contract rate). Processing and site general administration and overhead costs (**SGA**) have been developed by Ausenco from first principles and are based on determined consumption rates, suitable costs from within Ausenco's databases, supplier estimates quotations, regional labour rates with on-costs and known established cost structures. Concentrate transport and logistics costs are based on a budget estimate provided by DAMCO Logistics Mali SA (**DAMCO**), part of the A P Moller-Maersk group, an internationally recognised global transport and logistics specialist. The LOM costs were then calculated by Northshore Capital Advisors Pty Ltd (**Northshore**) in the financial modelling. These costs are detailed in Table 6 and Table 7, displayed graphically in Figure 6 below.

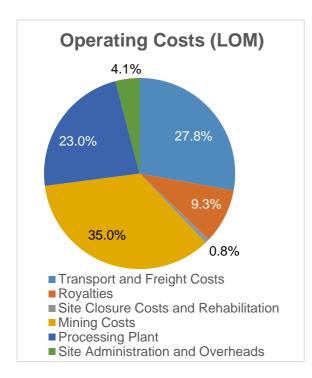


Table 6: Operating Cost Estimate (LOM)

Operating Costs (Real LOM US\$)	Cost (M)	Per t ROM
Mining	620.03	19.89
Grade Control	3.09	0.10
Site Closure Costs and Rehabilitation	14.00	0.45
Processing	408.56	13.10
SGA	72.74	2.33
Road Transport and Port Handling Costs	494.95	15.88
Mali State Ad Valorem Royalty	65.70	2.11
Mali State ISCP Royalty	99.04	3.18
Total Operating Costs	1,778.11	57.03

Figure 6: Operating Estimate Distribution

Table 7: Operating Cost Breakdown

Brook Hunt Cash Costs (US\$): Real	
C1 Cost	US\$/t Concentrate
Mining	109
Processing	72
SGA	13
Road Transport and Port Handling Costs	87
C1 Costs	281

C2 Cost	US\$/t Concentrate
C1 Costs	281
Initial Capital Depreciation	30
Sustaining Capital Depreciation	7
C2 Costs	317



C3 Cost	US\$/t Concentrate
C2 Costs	317
Site Closure Costs and Rehabilitation	2
Mali State Ad Valorem Royalty	12
Mali State ISCP Royalty	17
C3 Costs	349

All-in-Sustaining Cost (AISC)	US\$/t Concentrate
C3 Costs	349
Initial Capital Depreciation	(30)
All-in Sustaining Cost (AISC)	319

9. Marketing

Lithium Products Consumption Forecasts

In June 2018, Birimian received a Lithium Market Study commissioned from the Roskill Consulting UK Limited (**Roskill**), which stated that the outlook for lithium consumption had improved significantly since mid-2016, following much stronger forecasts for Electric Vehicle (**EV**) requirements led by government targets/mandates and manufacturers' plans. Roskill now expects the total lithium market to slightly exceed 1Mt LCE in 2030, an 18.6% pa increase from 2017, in the base-case scenario; this represents a five-fold increase in consumption; however growth is predicted to be more moderate in the short-term, with 9.5% pa growth to 2022, when the market could reach 321,200t LCE, before a predicted acceleration in the mid-2020s.

Consumption of lithium in volume terms is expected to continue to be driven by the rechargeable battery sector, increasingly for automotive use, with rechargeable batteries forecast to register 22.7% pa growth through to 2027, reaching 683,000t LCE.

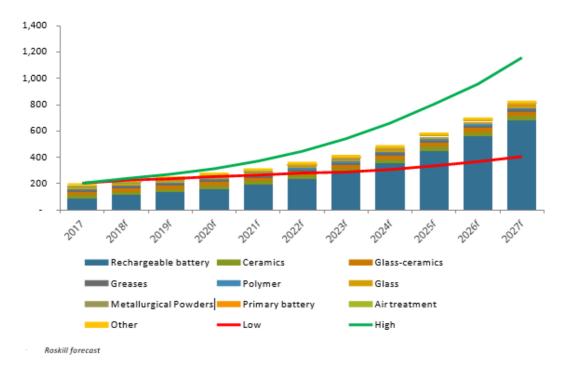


Figure 7: World: Forecast consumption of lithium by first use, 2017-27 (000t LCE)



Spodumene Concentrate Pricing

The pricing deck for spodumene concentrate used in the PFS has been based on price forecasts from independent commodity forecasts compiled by Siggiconnect Pty Ltd (**Siggiconnect**). This forecast concludes a long-term Concentrate price of US\$684/t, however the lower prices forecast for the first three years of production means that the average price used for the life of the project is US\$666/t (see Table 8).

The lithium carbonate prices used in the PFS reflect the forecast weighted average price of lithium carbonate imported into China which is the likely destination for conversion to chemical, irrespective of whether the concentrate is sold to a Chinese, Korean or Japanese company.

2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 Long Term **Lithium Carbonate** US\$/t 11,791 12,500 10,000 8.000 8,500 9,000 10,000 10,000 10,000 10,000 10,000 Price CIF **Spodumene Price** US\$/t 714 607 714 714 714 714 714 842 893 571 643 6.0% Li₂O CIF **Spodumene Price** US\$/t 812 863 684 541 577 613 684 684 684 684 684 6.0% Li₂O **FOB**

Table 8: Spodumene Concentrate Forecast Pricing

The Goulamina Mineral Resource estimate was constrained by using a nominal Concentrate price of US\$750/t for the purpose of defining reasonable prospects for eventual economic extraction, whereas the financial model in the PFS uses real pricing based upon the real price forecast provided by Siggiconnect (see Section 9) and a 2% annual inflation factor. Siggiconnect conclude that a suitable long-term price for Concentrate is US\$684/t (real). The difference between the price used for Mineral Resource determination and the PFS is consequently small and, in any event, has no bearing on the outcomes or findings of the PFS or the validity of the Goulamina Mineral Resource estimate.

Hard Rock Lithium Cost Comparison

Goulamina's potential as a low cost and highly competitive hard rock Li₂O producer has been highlighted in independent lithium cost analysis prepared by Roskill. Roskill's cost analysis highlights the robust economics of the Project. Based on global data for 63 operating mines and development & exploration projects and on a per-tonne of LCE contained in concentrate basis, Roskill's Lithium Cost Model currently ranks Goulamina as follows:

- Mine Site/Mine Gate Cost 5th;
- Mine Site + FOB transport 6th; and
- Mine Site + CIF transport + Royalties + Sustaining Capex (all-in sustaining cost basis) 14th.

During the process of drafting and verifying its updated PFS announcement, Birimian sought and received approval from Roskill to quote Roskill's industry cost comparison analysis initially provided to Birimian in May 2018 by Roskill's Lithium Cost Model Service.

On 3 July 2018, Roskill advised Birimian that it had found an error in Roskill's earlier industry cost model that incorrectly placed Goulamina lower on the future production cost curve, which was reported by the Company in an announcement entitled "Further Cost Reductions – Roskill Ranks Goulamina 3rd Lowest on Cost Curve" (*BGS*, 28 May 2018).



At the time of writing this announcement, on an all-in sustaining cost basis per tonne of LCE production, Roskill ranked Goulamina 14th globally against the population of operating mine and future hard-rock lithium projects contained within Roskill's Lithium Cost Model Service.

Roskill's information relates only to Goulamina's projected cost position relative to industry peers prior to this announcement and has no bearing on key economic metrics of this updated PFS.

10. Infrastructure, Services and Logistics

Raw water supply for the Project will be sourced from the Sélingué Dam, located to the west of the site, to be pumped via a pipeline approximately 25km long. Raw water will be treated on site and distributed throughout the process plant, mine and infrastructure to meet demand. A diesel-fired power station and fuel farm will be constructed adjacent to the process plant to service the electrical power needs of the Project.

The TSF will be located to the south of the process plant and comprises a conventional, above-ground, paddock-style TSF constructed from materials borrowed from within and adjacent to the TSF footprint. The TSF will require ~110 ha of cleared land and will be constructed using a three-staged approach which will provide progressively increased storage capacity to accommodate the LOM tailings. A decant system will be installed in the TSF to facilitate surface water recovery. The decant system will have a rock ring, which acts as a filter, and fitted with a pump and separate return water pipeline.

Site accommodation will be located approximately 4km north east of the process plant, accessible via a new road to be constructed as part of the Project capital works. It is anticipated that approximately 300 personnel will need to be housed in the Project accommodation village during mining and processing operations, with the balance of Project personnel being sourced from and accommodated in existing local villages. As well as accommodation units, the accommodation village will comprise ancillary buildings including kitchen-dining facilities, security centre and other central support facilities.

Communications, consisting of phone, internet and radio communications, will be established for the site.

Birimian has elected to use road transport to deliver Concentrate to port. There is sufficient road transport capacity available to transport (up to) 380,000 tpa of Concentrate. The PFS assumes the use of the Port of Abidjan for Concentrate export. Abidjan is one of the largest, best equipped and most efficient ports in the region and is closer to the Project than the Port of Dakar (see Figure 2). Both ports have bulk loading facilities, which are under-utilised, while proximate product storage facilities have also been identified.

PFS cost estimates for transport and logistics are based on an independent assessment and consequent budget estimate provided to the Company by DAMCO.

11. Environmental and Social Impact Assessment

Birimian is preparing an Environmental and Social Impact Assessment (**ESIA**) for Goulamina. Digby Wells Associates Mali SARL (**Digby Wells**) has been engaged to prepare the ESIA and assist Birimian in conducting the Government consultation and public participation process. A draft Preliminary ESIA has been completed, based on the Terms of Reference submitted to Government and approved in February 2017.

The draft Preliminary ESIA was the subject of the public participation meetings held in June 2018. The Preliminary ESIA will be submitted to Government in July 2018. A further validation workshop will follow with the Inter-Ministerial Technical Committee prior to final ESIA submission for Government approval. There is a statutory maximum of 45 days from ESIA submission to an approval decision.



12. Financial Modelling

This section consolidates the impacts of Project capital and operating costs as determined by Birimian and its contributors in the PFS process. The PFS estimate process employed foreign exchange rates current at June 2018, as detailed in Table 9 below:

Table 9: Operating Cost Estimate (LOM) Key PFS Exchange Rates – currency: US\$

Currency	Rate		
US\$	1.00		
A\$:	1.333		
Euro:	0.83		
ZAR:	11.765		
XOF:	555.556		

Northshore generated the PFS financial model as the basis for the PFS economic assessment. The recommended pricing forecast used in the model is discussed below. The average FOB (Abidjan) price assumption for Concentrate over the LOM is US\$666/t. Table 10 summarises the output of the financial model.

Table 10: PFS Financial Summary

Parameter		A\$	US\$
Total project pre-production capital	\$M	265	199
Gross Revenue @ forecast Li ₂ O price of US\$666 per tonne	\$M	5,060	3,796
Free cash (pre-tax): Undiscounted	\$M	2,358	1,769
Free cash (post-tax): Undiscounted	\$M	1,760	1,320
Payback (post tax) from production start	Years	2.6	
Project NPV ₁₀ (pre-tax)	\$M	920	690
Project NPV ₁₀ (post-tax)	\$M	653	490
Project IRR (pre-tax): Real	%	49.5	
Project IRR (post-tax): Real	%	40.1	

Peak funding excludes financing costs for the Project, as the model is a 100% equity model and covers the period from the first draw down of Project funds to the date the Project generates positive cashflow.

With respect to Contingency, an amount has been applied to each component of the Project construction capital, excluding mining development and capitalised pre-production operating costs. This amount is based on the respective level of engineering definition and associated detail. The purpose of the Contingency is to make specific provision for unknown elements of potential cost growth within the Project scope and, by taking this approach, reduce risk of cost over-run.

Project Valuation and Sensitivity Analysis

Table 11 below illustrates the comparative sensitivities of the Project to changes in the spodumene price.



Table 11: Project Sensitivity to Spodumene Price

	Post-	Тах	Pre-Tax		
Average Price LOM (US\$ / t real)	NPV _{10 (real)} US\$ M	IRR % (real)	NPV _{10 (real)} US\$ M	IRR % (real)	
550	281	28.7	410	35.3	
600	371	33.8	531	41.6	
PFS @ 666	490	40.1	690	49.5	
750	641	47.9	892	59.2	
800	731	52.3	1,012	64.8	

As evidenced by the sensitivity analysis, the Project remains economically robust should the spodumene price drop by more than 20%.

Table 12 below illustrates the comparative sensitivities of the Project to changes in the discount rate used in financial modelling.

Table 12: Project Sensitivity to Discount Rate

	NPV _{10 (real)} US\$ M		
Discount Rate % (real)	Post-Tax	Pre-Tax	
7.5	620.3	859.6	
9	538.1	752.4	
PFS @ 10	489.9	689.6	
11	446.3	632.8	
12.5	388.5	557.3	

As evidenced by the sensitivity analysis, the Project remains economically robust at higher discount rates in the all equity financial model.

The sensitivity of the post-tax NPV and IRR was further evaluated for changes in the key variables and parameters such as:

- concentrate selling price;
- overall operating costs;
- capital costs (pre-operating and sustaining); and
- processing recovery.

These sensitivities are depicted in Table 13 (NPV) and the spider charts (Figure 8 and Figure 9) below. As can be seen, the Project NPV and IRR are most sensitive to Concentrate price and process recovery. It has limited sensitivity to capex and moderate sensitivity to operating cost.

Table 13: Project Sensitivity Table (Post-Tax NPV US\$ M)

Parameter	(40%)	(30%)	(20%)	(10%)	-	10%	20%	30%	40%
Concentrate Selling Price	6.7	130.1	250.2	370.0	489.9	609.7	729.5	849.4	969.2
Overall Operating Cost	707.4	653.0	598.6	544.3	489.9	435.5	381.1	326.7	272.3
Capital Costs	556.4	539.8	523.1	506.5	489.9	473.2	456.6	440.0	423.3
Processing Recovery	74.3	178.7	282.4	386.2	489.9	593.6	697.3	801.0	904.7



An "all price movement" relative sensitivity analysis has been undertaken and is depicted in Table 14 below. This table demonstrates that the Project is most sensitive to Concentrate price, with a factor of 1x. After that, recovery (0.9x), discount rate (0.5x) and overall operating cost (0.5x) are the most sensitive areas. The Project is least sensitive to total capital costs (pre-production and sustaining), processing and administration (**P&A**) operating cost, freight and fuel price. The lower the number in the table, the lower the sensitivity to the particular parameter.

Table 14: Project Sensitivity Analysis (Relative to All Price Movement)

Parameter	(40%)	(30%)	(20%)	(10%)	-	10%	20%	30%	40%
Concentrate Price	1.0 x	1.0 x	1.0 x	1.0 x		1.0 x	1.0 x	1.0 x	1.0 x
Overall Operating Cost	0.5 x	0.5 x	0.5 x	0.5 x		0.5 x	0.5 x	0.5 x	0.5 x
Total Capital Costs	0.1 x	0.1 x	0.1 x	0.1 x		0.1 x	0.1 x	0.1 x	0.1 x
(P&A) Operating Cost	0.1 x	0.1 x	0.1 x	0.1 x		0.1 x	0.1 x	0.1 x	0.1 x
Operating Cost	0.2 x	0.2 x	0.2 x	0.2 x		0.2 x	0.2 x	0.2 x	0.2 x
Freight	0.1 x	0.1 x	0.1 x	0.1 x		0.1 x	0.1 x	0.1 x	0.1 x
Fuel Price	0.1 x	0.1 x	0.1 x	0.1 x		0.1 x	0.1 x	0.1 x	0.1 x
Discount Rate	0.5 x	0.4 x	0.4 x	0.4 x		0.4 x	0.3 x	0.3 x	0.3 x
Recovery	0.9 x	0.9 x	0.9 x	0.9 x		0.9 x	0.9 x	0.9 x	0.9 x

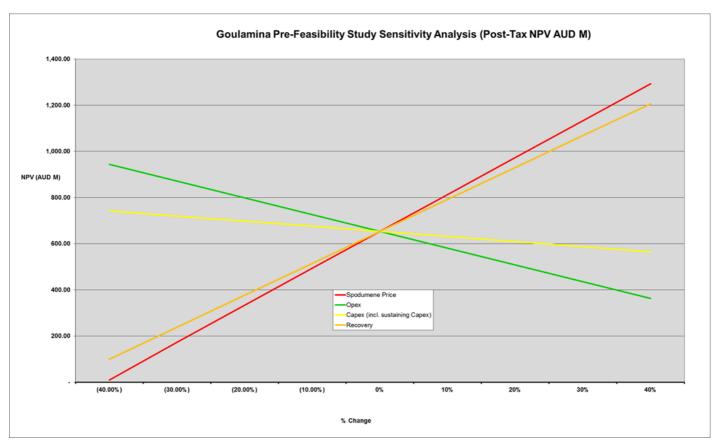


Figure 8: Post-Tax NPV Sensitivity Analysis (A\$)



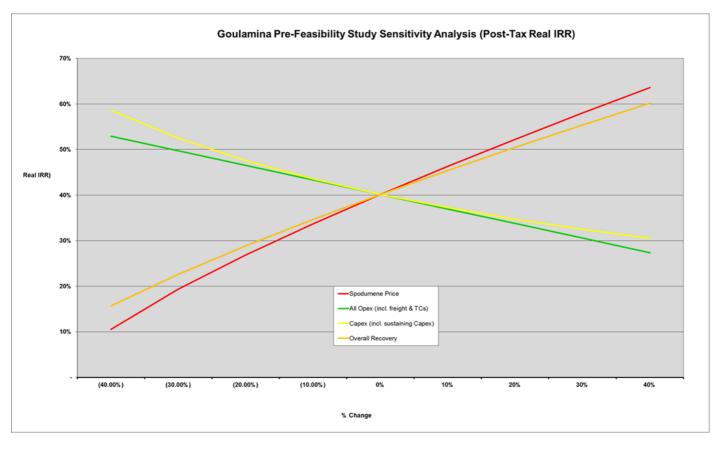


Figure 9: Post-Tax IRR Sensitivity Analysis (A\$)

13. Legal and Permits

Birimian's wholly-owned Malian subsidiary Timbuktu Ressources SARL (**Timbuktu**) holds the exploration permit for the Torakoro tenement (**Exploration Permit**) on which the Project is located. Timbuktu and the State of Mali entered into an Establishment Convention on 29 October 2016 (**Establishment Convention**), which defines general conditions under which exploration and mining works can be carried out and the respective rights of each party, including conditions of investment, customs duties, foreign investment, financial, tax and economic conditions. It also includes an amount for a Founder's Fee which is payable at exploitation stage. In the case of the Exploration Permit, the Founder's Fee is US\$300,800. The Establishment Convention provides an obligation for the State of Mali to facilitate the allocation of all permits, licences and rights required for exploration or exploitation projects.

The Exploration Permit is granted for a maximum initial term of three (3) years in accordance with article 38 of the Mining Code and covers an area of 100 km². It includes mineral substances of Group 2 defined by article 8 of the Mining Code which includes lithium. In accordance with article 64 of the Mining Code, an Exploration Permit holder is entitled to apply for an exploitation permit. As Timbuktu is the Exploration Permit holder, it is the sole legal entity entitled to obtain, by law, an exploitation permit for the whole area covered by the Exploration Permit. This entitlement is only enabled if all statutory requirements enumerated by the Mining Code are met. The Ministerial Order which granted the Exploration Permit stipulates that, in the event one economically viable deposit is identified and if requested by the holder, an exploitation permit will be granted in respect of the area covered by the Exploration Permit.

An application for an exploitation permit will be lodged in respect of Goulamina as delineated within the perimeter of the Exploration Permit. Article 65 of the Mining Code requires the holder of the Exploitation Permit to be a "limited liability company" and provides for the State of Mali to take a 10% participation free of any charge. This interest is non-dilutable and is a priority interest. In addition, to this initial 10% free carried interest, the State of Mali has a right to acquire up to



a further 10% interest. It is also possible for Malian private investors to acquire at least 5% of the shares of any exploitation company, to be paid in cash, under the same conditions as those applicable to other private shareholders.

The exploitation permit application must have an approved ESIA and feasibility study associated with it. The PFS will satisfy the requirements for a feasibility study under Malian mining law. Additional documents required to be lodged with the exploitation permit application are a Community Development Plan and Livelihood Restoration Plan, both of which are at an advanced development stage by the Company.

On 9 February 2016 Timbuktu, Birimian and the Cooperative Society Femima (Fédération des Femmes Minières du Mali) (**FEMIMA**), a women's mining cooperative in Mali, entered into an agreement (**Heads of Agreement**) which required performance of obligations by both parties in respect of a mineral area Bogodassale-Est which was covered by an Exploration Permit held by FEMIMA. The affected areas are now partly covered by the Exploration Permit. This agreement was novated under a Mineral Cooperation Agreement signed on 27 October 2017 (*BGS*; 1 Nov 2017). As part of the Heads of Agreement, Timbuktu agreed to make instalment payments to FEMIMA upon the grant of the different mineral titles it needs to obtain to carry out exploration and exploitation activities within the Bogodassale-Est area. FEMIMA is entitled to the future payments detailed in Table 15:

Table 15: FEMIMA Future Payments

Payment	Conditions of Payment
US\$20,000	Provision of assistance by FEMIMA for the exploitation permit application.
US\$200,000	Following grant of exploitation permit and commencement of first commercial production (as defined in the Mining Code)

14. Key Risks Identified for the Project

A Project risk assessment was undertaken for the PFS process. Participants in the Project risk activity included participants from Birimian, Ausenco, Cube and AQ2 Pty Ltd (AQ2). Risks were considered under the following broad areas:

- Political
- Environmental
- Delivery
- Contract
- Commercial
- Client
- Resources
- Technical
- Program
- Physical

Risk activities identified no risk of such magnitude as to make the development of the Project potentially inadvisable. All risks presently identified are considered manageable.



15. Project Funding

Offtake Arrangements

Development of the Project with the recommended plant size of 2Mtpa would result in production of 362,000tpa (6% Li₂O spodumene concentrate), or approximately 53,704 tpa of LCE for an initial mine-life of 16 years.

The Company has engaged with potential offtake partners interested in securing a long-term and reliable supply of lithium, principally for use in lithium battery manufacture. Birimian has also received several inquiries from potential offtake customers seeking a secure source of Li₂O. The Company is mindful that it is best placed to secure attractive offtake and financing support arrangements following the release of the PFS.

Announcement of the Project financial and technical metrics, including the maiden Ore Reserve, enables Birimian to advance the negotiating process as potential customers gain better understanding of the Project's economic parameters. Birimian believes these changed circumstances create a favourable climate for the Company to conclude binding offtake arrangements. Accordingly, the Company will now accelerate global marketing activities during the balance of 2018.

Funding

The Company is in discussions with a number of potential Project financiers and advisers. Birimian believes that, as with offtake arrangements, release of the PFS key findings and maiden Ore Reserve will materially assist the Company to finalise its development and other funding arrangements during the next 12 months.

16. Project Contributors

The PFS was prepared to a high standard by Ausenco, with the assistance of various independent consultants, highly experienced in their respective disciplines. All project contributors were engaged and supervised by Birimian or a Birimian subsidiary and are listed in Table 16.

Table 16: Goulamina PFS contributors

Third Party Contributor	Contribution
Ausenco Services Pty Ltd ABN 82 011 057 837 (Ausenco)	Lead contractor for the completion of the PFS and final report generation. Process plant and infrastructure designs and development of associated capital and operating cost estimates.
AQ2 Pty Ltd ACN 164 858 075 (AQ2)	Hydrogeological studies.
Cube Consulting Pty Ltd ACN 094 321 829 (Cube)	Mineral Resource and Ore Reserve estimates.
Majesso Consulting Pty Ltd ACN 137 103 014 (Majesso)	Capital and operational expenditure estimates for mining.
Land & Marine Geological Services Pty Ltd ACN 009 320 870 (LMGS)	Tailings storage facility (TSF) engineering and design.
ALS Metallurgy Pty Ltd ACN 008 901 933 (ALS)	Metallurgical testwork.
Valdrew Nominees Pty Ltd t/a Nagrom and Company (Nagrom)	Metallurgical testwork.
Digby Wells Associates Mali SARL (Digby Wells)	Environmental and social impact studies.
Roskill Consulting UK Limited (Roskill)	Lithium supply demand and cost forecast.
Siggiconnect Pty Ltd ACN 159 831 562 (Siggiconnect)	Independent Concentrate price forecast.
Northshore Capital Advisors Pty Ltd ACN 618 347 498 (Northshore)	Financial modelling.



17. Conclusions

- The PFS demonstrates that Goulamina comprises a substantial lithium resource that can be developed as a robust, long-term, low-cost, hard-rock lithium concentrate supplier.
- Average production LOM is forecast to be 362,000 tpa of Concentrate (53,704 tpa LCE).
- Average C1 operating costs are forecast to be US\$281/t Concentrate for LOM.
- Construction capex of A\$196M (US\$147M) plus Contingencies of A\$44M (US\$33M) and mine development and indirect costs of A\$25M (US\$19M) for total capex of A\$266M (US\$199).
- Project NPV₁₀ is forecast to be US\$490M and IRR 40.1%, both post tax.
- The Project's outstanding economic and technical metrics support a decision to rapidly proceed with a FS and engineering design work which is recommended.
- Significant opportunities exist to further enhance the already excellent Project economics through process improvement and optimisation and further cost reductions.
- Continued exploration work on identified pegmatite zones has the potential to further extend the already very substantial resource base thereby increasing Project operating life and potentially justifying an expansion of its size. Such expansion is provided for in the process plant design.

18. Next Steps

The Project's development plan envisages the following activities targeting a Final Investment Decision (FID) and commencement of construction in the first half of 2019 and plant commissioning in the first half of 2020:

- Completion of ESIA process; report submission and environmental permitting.
- Completion of exploitation (mining) licence approval process.
- Establishment of new subsidiary company to hold the exploitation (mining) licence.
- Completion of FS and definitive engineering studies.
- Signing of binding offtake agreements.
- Securing of Project financing.
- Procurement and ordering of long lead-time items.
- Construction, commissioning and production ramp-up.

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Birimian Limited

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APPENDIX

Forward looking and cautionary statements

This announcement contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the pre-feasibility and feasibility studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral resources, results of exploration and relations expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely',' believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of lithium and other metals; possible variations of ore grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully and readers should not place undue reliance on such forward-looking information. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

Statements regarding plans with respect to the Company's mineral properties may contain forward-looking statements in relation to future matters that can be only made where the Company has a reasonable basis for making those statements. Competent Person Statements regarding plans with respect to the Company's mineral properties are forward looking statements. There can be no assurance that the Company's plans for development of its mineral properties will proceed as expected. There can be no assurance that the Company will be able to confirm the presence of mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties.

Previously reported information

This announcement refers to the following previously reported information:

- Mineral Resources in the announcement entitled "18.06.29 Danaya Mineral Resource Upgrade" and dated 29 June 2018; and
- Ore Reserves in the announcement entitled "High Grade Maiden Ore Reserve for Goulamina" and dated
 4 July 2018.

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