

22 November 2022

Phase 1 Economics Updated & Improved

- Phase 1 valuation and returns materially improved versus the May 2020 Definitive Feasibility Study with all input data updated; base case NPV_{8%} of US\$530M and IRR of 42% at a long term lithium hydroxide price of US\$22,840/t compared to DFS data of US\$221M and 31% respectively
- Lithium price sensitivity analysis sees the NPV_{8%} range from a downside scenario based on a US\$16,800/t lithium hydroxide price of US\$452M (A\$675M) to an upside figure of US\$703M (A\$1,050M) based on a lithium hydroxide price of US\$32,350/t
- Integrated project control estimates total US\$266M, comprising US\$203M for the Abu Dhabi chemical plant and US\$63M for the Karibib mine and concentrator including contingencies
- Operating costs revised from first principles with C1 costs of US\$7,100/t and All In Sustaining Costs after by-product credits of US\$11,500/t LCE for the vertically integrated Project, equivalent to mid-second quartile based on the 2022 global cost curve
- Ore Reserve and mine schedule updated based on a long-term lithium hydroxide price of US\$17,015/t for an operating life of 15 years
- Upgraded satellite Mineral Resources including Helikon 4 near completion; Ore Reserve estimation to start imminently, with potential to materially extend Project life to 20 years
- Project is supported by the world's only known JORC Code (2012) (or NI43-101) compliant Ore Reserve estimate for the strategic alkali metals caesium and rubidium
- Project sized for attractive financial returns at moderate production levels
- Binding lithium hydroxide offtake is in place with Traxys and Project funding initiatives are at an advanced stage, with control estimates and schedules being the final Project parameters required for lender technical due diligence

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Lepidico Ltd (ASX:LPD) (“Lepidico” or “Company”) is pleased to advise that it has received the control estimates and schedules for both the Abu Dhabi chemical plant and the Karibib concentrator. These represent the final Phase 1 Project data required to complete lender technical due diligence, which is on the Project finance critical path, as environmental and social due diligence was completed earlier this year. The capital cost estimate including contingency for the chemical plant is US\$203M (million) and for the concentrator US\$63M for a combined US\$266M.

Phase 1 is based on an integrated mine, concentrator and chemical plant development that collectively has compelling investment fundamentals. The Base Case unlevered NPV_{8%} for the Project has increased from US\$221M in the May 2020 Definitive Feasibility Study (DFS) to US\$530M (A\$791M), a rise of 140%. Importantly, the Internal Rate of Return (IRR) has also increased from 31% in the DFS to 42%. Higher forecast lithium hydroxide prices – based on the Benchmark Mineral Intelligence (BMI) latest data – have more than offset the impacts of inflation and scope changes that reduce operating risk and improve maintainability.

Chemical plant capacity is unchanged at 56,700tpa (dry basis) of lithium mica/amblygonite concentrate for production capacity of 5,600tpa of lithium hydroxide. Concentrate feed grade is predicted to range from 2.5% to 3.9% Li₂O over the project life and average of 2.7%, giving average annual lithium hydroxide output of 4,350/t. The significant excess process capacity in the impurity removal and lithium recovery circuits in particular provides opportunity for optimisation and higher output once in production. The relatively modest size of Phase 1 for a lithium chemical manufacturer along with its high level of installed capacity are important risk mitigants, as development and operating risks tend to increase exponentially with scale. The overall lithium recovery to lithium hydroxide from concentrate is estimated at 89% versus 90% in the DFS.

Phase 1 chemical plant by-products include caesium, rubidium, amorphous silica, sulfate of potash (SOP), and a gypsum rich residue, with no solid process waste.

Phase 1 Mineral Resources for the redevelopment of the Rubicon and Helikon 1 deposits remain unchanged from those used in the DFS, however, new Ore Reserves have been estimated with all inputs reviewed and revised (see Appendix I). Again, the higher lithium price used of US\$17,015/t (BMI March 2022 long-term estimate) more than offset the higher operating costs, resulting in Ore tonnes increasing to 8.27M t grading 0.4% Li₂O and the life of mine strip ratio falling to 2.9 to 1 (from 3.8 to 1), for an operating life of 15 years. Development work to upgrad Mineral Resources has recently been completed for Helikon 4 and stockpile material with inaugural Ore Reserve estimates due shortly that should extend mine life towards 20 years, further enhancing Project economics.

Managing Director, Joe Walsh, commented, “Completion of the control estimates and schedules represents a major milestone in the advancement of the Phase 1 Project, allowing critical path lender technical due diligence to complete. It is also gratifying to see that the significant capital cost inflation – a result of a global phenomenon – has been more than offset by higher lithium price forecasts, which are predicated on market fundamentals that continue to improve as energy transition momentum grows. Lepidico’s Phase 1 Project represents a unique development opportunity for the production of four valuable alkali metal streams, lithium, caesium, rubidium and potassium. This is enabled by the Company’s proprietary process technology, L-Max[®], coupled with lepidolite as the mineral feed source. LOH-Max[®] further differentiates Phase 1 from other lithium projects by providing a single process step solution for the production of lithium hydroxide without the costly and potentially problematic production of sodium sulphate. Phase 1 is demonstrated to be robust technically, economically and from a sustainability perspective. The immediate focus is now on banking the Project to transition the business into development and on into production.”

Key Results

Parameter (base case unless stated otherwise, 100% basis)	Unit	Value
Project duration	Year	19
Production life	Year	15
Total tonnes mined	'000's t	23.79
Ore tonnes processed	'000's t	8.27
Waste to ore ratio	#	2.9
Average grade of ore tonnes processed	%Li ₂ O	0.40
Lithium recovery to concentrate	%	80.1 avg
Lithium grade of concentrate	%Li ₂ O	2.5-3.9, 2.8 avg
Cost of production to mine gate	US\$/t concentrate	376
Cost of concentrate logistics FOB Walvis Bay	US\$/t concentrate	147
Lithium recovery from concentrate	%	89
Total lithium hydroxide monohydrate production	LoM t / tpa	65,500 / 4,350
Total rubidium sulfate production	LoM t / tpa	21,200 / 1,400
Total caesium sulfate production (salt basis)	LoM t / tpa	3,600 / 235
Total sulfate of potash production	LoM t / tpa	103,000 / 6,900
Pre-production capital - (excludes working capital)	US\$M	266
Sustaining capital cost inc. leased amounts	US\$M	39
C1 cash cost ¹ (by-product LCE basis ³)	US\$/t LCE	7,100
AISC ² (by-product LCE basis ³)	US\$/t LCE	11,500
Post tax NPV ₈	US\$M	530
Free cash flow undiscounted	US\$M	1,187
Free cash flow average first 10 years of production	US\$M	92
EBITDA average first 10 years of production	\$M	135
Internal Rate of Return (8% discount rate)	%	42
Payback from start of production	Years	<3

¹C1 cash costs: Brook Hunt convention for the reporting of direct cash costs comprising mine site, product transportation and freight, treatment and refining charges and marketing costs.

²All-in sustaining costs (AISC): C1 cash cost plus royalties; corporate support and shared services costs; sustaining capital; lease principal and interest charges; and deferred mining and inventory adjustments capitalised.

³Net of by-product credits LCE basis: costs for lithium and other products after deduction of credits for by-product revenues, per tonne of recovered lithium carbonate equivalent.

Economic Analysis

Project economics take into account a ramp-up of throughput and recoveries to design levels over three years. Chemical plant throughput design is 56,700tpa (dry basis) of concentrate for nominal lithium hydroxide production of 4,350tpa. Design capacity in the lithium hydroxide circuit is 5,600tpa, which provides opportunity for optimisation and debottlenecking post start-up. By-product output varies with metal feed grades. Over the first ten years, the Project is expected to achieve average annual production of 235t caesium sulfate (salt basis), 1,400t rubidium sulfate (salt), 6,900t SOP and 33,000t of amorphous silica. Some 130,000tpa of gypsum rich residue will also be produced, which is planned to be sold both as a construction material and soil conditioning agent.

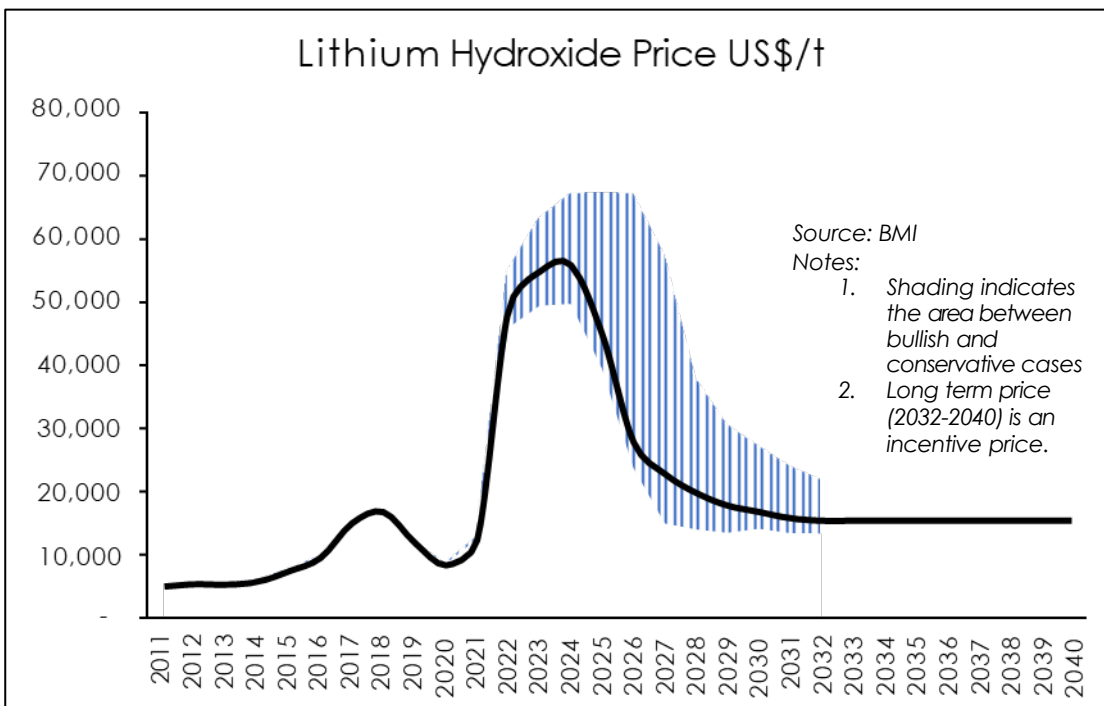
Phase 1 provides strong financial returns with a base case Net Present Value at an 8% discount rate of US\$530 million, which exceeds development capital by nearly 100%, after allowance for contingency. The Internal Rate of Return is an attractive 42% in real terms and ungeared for project debt. Payback of development capital is estimated to be approximately 3 years from start of commercial production. Free cash flow over the project life is estimated at US\$1,187 million (A\$1,770 million).

A royalty payment on concentrate production based on 2.0% of the “unit value” of concentrate is applied. The Karibib Project is also subject to a Namibian corporate tax rate of 37.5% for its mining and concentrator operations. No corporate tax is payable in the UAE on export sales.

Chemical Prices

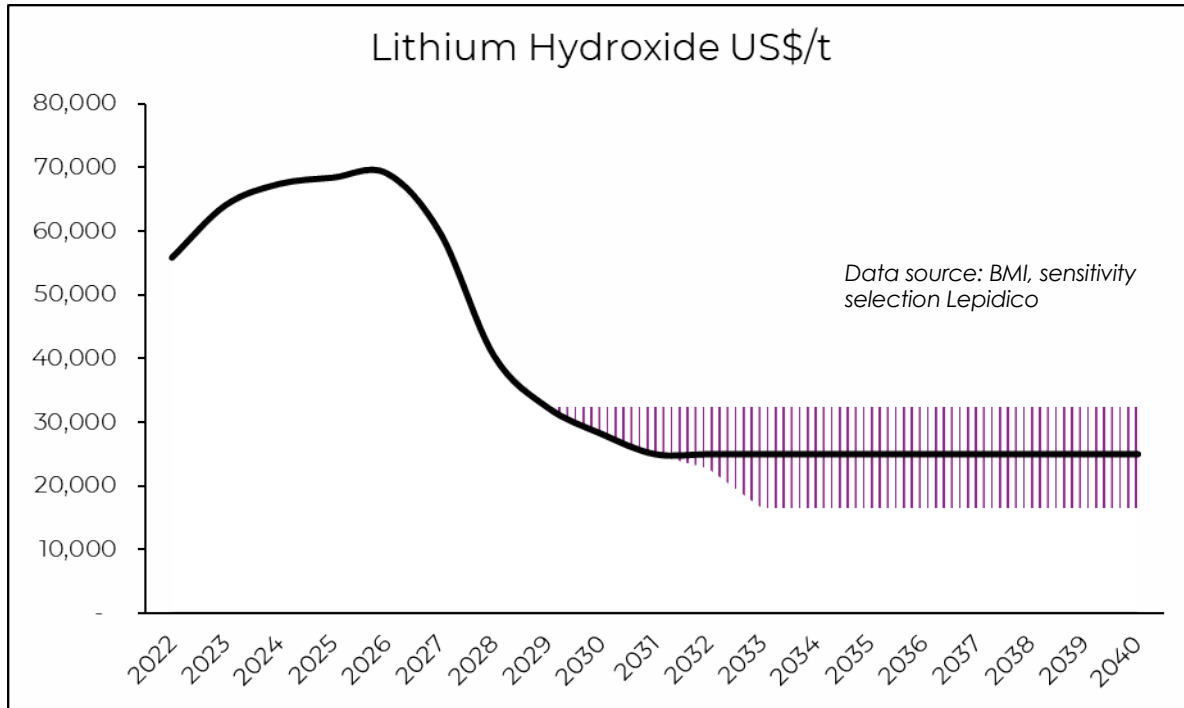
BMI's latest (September 2022) lithium chemical and concentrate supply/demand and pricing forecasts (Figure 1) are used as the basis for Project economic evaluation. Lepidico has applied a price discount for the first year of commercial production to allow for production qualification. BMI states, “from 2026, prices will begin to fall to more stable levels. The sharpness of the decline will somewhat depend on the risk mitigation strategies chosen now and in the next two years by major chemical producers, i.e. the degree to which companies pin formulas to Chinese prices.”

Figure 1: Lithium hydroxide price forecast, September 2022



BMI also states, “There is a high chance that once prices abate and supply satisfies base case demand, the market will shift into an upside demand scenario, again placing pressure on prices. This will only exacerbate the huge supply deficit likely to be seen from around 2030-32 as the market grows rapidly.” This outlook has led to three long term prices (Figure 2) to be adopted for a Phase 1 economic sensitivity assessment: US\$16,600/t BMI’s long-term figure from 2033; US\$22,840/t BMI’s 2032 forecast; and US\$32,350/t BMI’s 2029 forecast.

Figure 2: Lithium hydroxide price forecasts used for sensitivity assessment



Markets for caesium and rubidium chemicals are opaque with little data available on supply/demand and pricing. Lepidico is also limited by confidentiality agreements with third parties as to the information it can disclose pertaining to these markets. Price forecasts for caesium sulfate and rubidium sulfate (50% solutions) of US\$25,000/t and US\$12,500/t respectively are employed.

Operating Costs

Unit operating costs for the Karibib operations are estimated to average US\$376/t of concentrate, as presented below. During the early years of operation costs will be lower due to low waste stripping requirements, short haul distances and above average ore grades. Logistics costs to transport concentrate to the port of Walvis Bay and shipment on to Abu Dhabi are presented under Chemical Plant operations.

Karibib Operating Cost Item	US\$/t Concentrate	US\$/t Ore
Mining	134	12.70
Concentration	185	-
General & Administration	58	-
Total Site Costs	376	-

The mineral concentrator will use conventional crushing, grinding, desliming and froth flotation processes followed by dewatering of concentrate and tailings streams. The lithium principally occurs in lepidolite, amblygonite and lithian muscovite although any zinnwaldite will also be recovered through the froth flotation process. The overall recovery of lithium to the lithium concentrate is 75-88% (average 80.1%), at a concentrate grade of 2.5%-3.9% Li₂O depending on mineralogy and based on testwork undertaken in 2022.

The concentrator has been designed to process 333,000tpa (dry basis) of ore for the first four years (“Stage 1”) and 541,000tpa (dry basis) from Year 5 of production (“Stage 2”). Stage 2 requires the addition of a second smaller ball mill, reconfiguration of the flotation circuit and the installation of a second tailings filter. The plant will be debottlenecked in Year 7 to cater for a declining head grade. Addition of mill feed from Helikon 4 once Ore Reserve estimates are complete is expected to materially defer the Stage 2 expansion.

The Abu Dhabi chemical plant is designed to process 56,700tpa (dry basis) of lithium mica/amblygonite concentrate at a feed grade of up to 4.2% Li₂O for production capacity of 5,600tpa of lithium hydroxide. Lithium hydroxide production will vary according to the grade in concentrate, with an annual life of mine estimate of 2.8% Li₂O for average annual production of 4,350t lithium hydroxide. There is considerable excess installed capacity in the impurity removal and lithium refining circuits in the chemical plant, which provides an opportunity for potential debottlenecking and optimisation post ramp-up. Unit operating costs for the chemical plant are estimated to average US\$10,278/t of lithium hydroxide before by-product credits, as presented below.

Chemical Plant Operating Cost Item	US\$/t LiOH.H ₂ O	US\$/t Concentrate
Concentrate Logistics Namibia to FOB	1,066	74
Freight Logistics to Chemical Plant	1,447	100
Chemical Plant	5,448	-
Administration, Management & Labour	2,316	-
Technology Royalty to Lepidico	TBD	-
Total	10,278	-

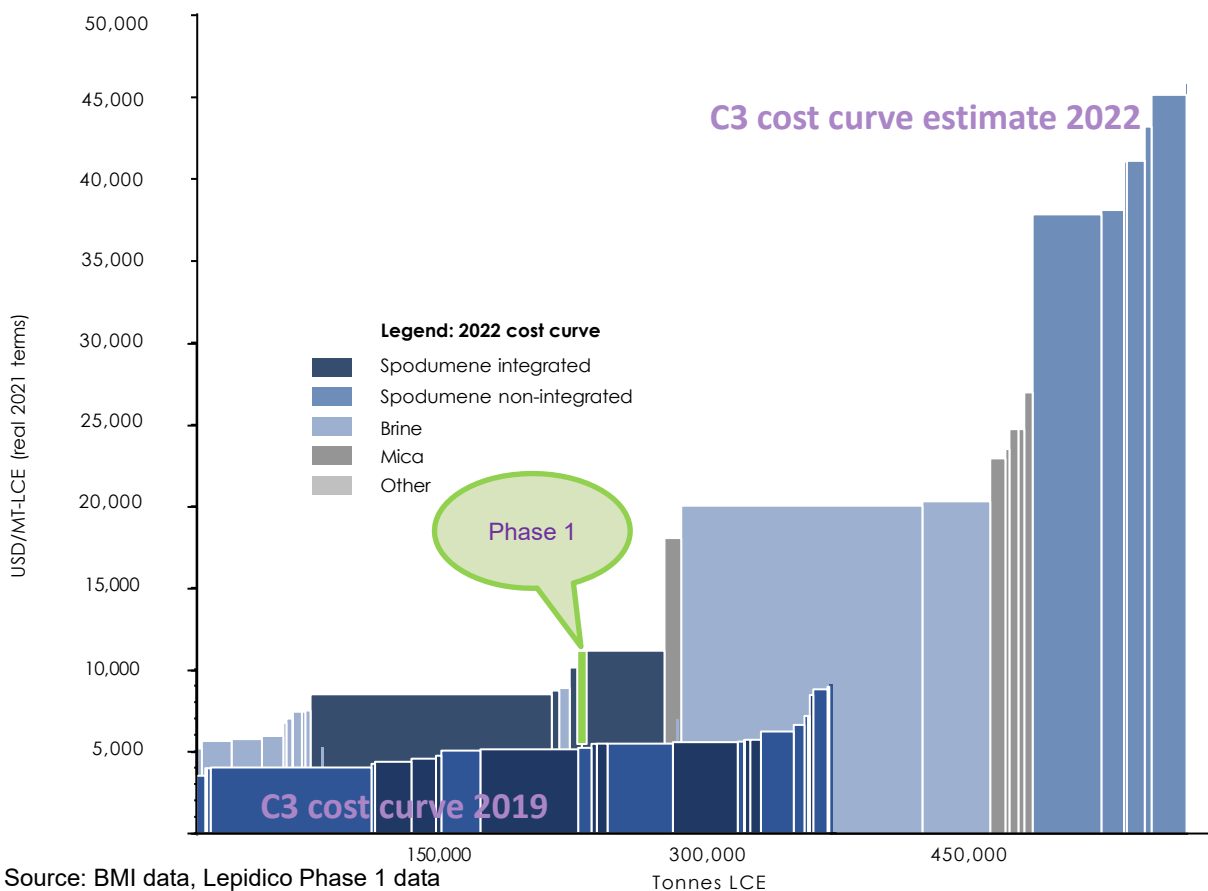
Phase 1 cash costs (“C1”) and AISC as presented have been derived from first principles with vendor quotations or market rates used for major drivers such as consumables.

C1 cash costs follow the convention developed by “Brook Hunt” for the reporting of direct cash costs comprising mine site, product transportation and freight, treatment and refining charges and marketing costs. By-product unit cost accounting methodology is employed, which allocates all costs less revenues for by-products taken as a credit, per tonne of recovered primary product, in this case lithium hydroxide on an LCE basis.

AISC (or C3) include C1 cash costs as outlined above plus: royalties; corporate support and shared services costs; sustaining capital; lease principal and interest charges; and deferred mining and inventory adjustments capitalised.

Industry cost data is provided by BMI for 2022 and 2019 (Figure 3) with the latter used for the May 2020 DFS. The Phase 1 average AISC (real) is overlaid on the 2022 cost curve for reference.

Figure 3: Global lithium chemical cost curves LCE basis



Capital Costs

The control estimates for both the chemical plant and concentrator form the basis from which all actual costs and resources will be monitored against. All costs for the initial estimates presented have been developed from first principles and are based on vendor pricing for all major equipment. Lycopodium Minerals Pty Ltd (Lycopodium) completed the engineering, cost estimate and schedule for the chemical plant and an estimate for Engineering Procurement and Construction Management (EPCM) services. ADP Namibia Pty Ltd (ADP) completed the engineering, cost estimate, EPCM services estimate and schedule for the Karibib concentrator. Lepidico estimated the owner's costs and in collaboration with Strategic Metallurgy provided input to the Control Estimates and Control Schedules.

Since the last estimates for the DFS in May 2020 Project scope has developed further, with the chemical plant footprint expanding to accommodate increases in surge capacity into the flowsheet to improve operability. Pre-production capital costs for the vertically integrated Project total US\$266 million including contingency of US\$28 million, less sunk costs, as tabulated.

Capital cost estimates for the mine and concentrator development in Namibia total US\$53 million (June 2022 quarter) before contingency and escalation of approximately US\$10 million. The capital cost for the chemical plant in Abu Dhabi is estimated at US\$185 million including EPCM services, owner's costs (including Supervising Consultant) and all support buildings but before contingency of US\$18 million. The plant will have installed capacity for all revenue products at commissioning as per the current Process Design Criteria.

The implementation schedule for the chemical plant has increased versus the DFS, with final Stage 4 (ore) commissioning forecast for August 2025 based on Stage 2 EPCM works starting in December 2022.

Initiatives by Lepidico to refine the capital estimate and shorten the implementation schedule are already underway, with a revised schedule planned for the March 2023 quarter to coincide with full project finance.

Capital Cost Item	US\$M
Karibib Concentrator (less sunk costs \$1.5M)	41.9
Infrastructure	3.0
Owner's Costs	8.1
Contingency & Escalation	10.2
Karibib Project Sub-Total	63.2
Chemical Plant	136.7
EPCM (less sunk costs \$3.1M)	21.0
Owner's Costs	19.9
Support Buildings & Other Costs	7.3
Contingency	18.3
Chemical Plant Sub-Total	203.2
Total Pre-production Capital	266.4

Ore Reserves (Appendix I)

Ore Reserves are based on the Mineral Resources as presented in the May 2020 DFS. The dip, geometry and near surface location of the mineralised zones at the Karibib Project deposits are suitable for conventional open pit truck and shovel operations with drilling and blasting required to fragment both mineralised rock and waste rock. An industry standard approach to mine planning has been undertaken.

Whittle 4X™ pit optimisation was used by Australian Mine Design and Development PL (AMDAD) to define the location and shape of the opencut pits for the mine plan. The software uses stable pit wall slopes, mining, processing and administration operating costs, process recoveries and product prices to determine the highest value pit cone. It accounts for the interactions of these inputs with the deposit geometry, the depth, width and orientation of the mineralised zones and the grade distribution of the target product within those zones.

The highest value, or optimised, pit shell is then used to guide design of a practical working pit including wall slope designs and access roads.

Pit wall slopes are based on a geotechnical assessment by Pells Sullivan and Meynink engineers. The geotechnical assessment was based on dedicated geotechnical drilling in final pit walls, mapping of fault structures, core assessment and physical rock testing and failure modelling. Inter ramp angles are 55° based on 15m high benches with 8m berms.

The Rubicon pit design (see below) has been completed in four stages and Helikon 1 two stages. The stages have been selected based on value, grade, and strip ratio criteria.

This Ore Reserves Statement has been prepared by AMDAD in accordance with the guidelines of the Australasian Code for the Reporting of Resources and Reserves 2012 Edition (the “JORC Code 2012”) as tabulated below (Table 1 Appended).

The Karibib Project Ore Reserve is understood to be unique, being the only Code compliant estimate globally for both caesium and rubidium, and which also includes other valuable alkali earth metals lithium and potassium. This is a function of the metal endowment being predominantly associated with the mineral lepidolite, $K(Li,Al,Rb,Cs)_2(Al,Si)_4O_{10}(F,OH)_2$.

Pit	Mt	Li ₂ O %	Rb %	Cs ppm	Ta ppm	K %
Rubicon Pit						
Proved	1.60	0.50	2.58	312	44	2.15
Probable	4.99	0.33	1.87	204	31	2.13
Pit Total	6.59	0.37	2.04	230	34	2.14
Waste	21.57					
Waste: Ore Ratio	3.3					
Helikon 1 Pit						
Proved	0.69	0.58	2.23	458	54	1.73
Probable	0.99	0.46	2.03	478	68	1.68
Pit Total	1.68	0.51	2.11	470	62	1.70
Waste	2.22					
Waste: Ore Ratio	1.3					
Total Project						
Proved	2.29	0.52	2.47	356	47	2.02
Probable	5.98	0.35	1.89	249	37	2.06
Total Ore	8.27	0.40	2.05	279	40	2.05
Waste	23.79					
Waste: Ore Ratio	2.90					

Source: AMDAD

Financing

Lepidico has been working with debt finance advisor Lion's Head Global Partners (LHGP) since December 2019 and equity advisor Jefferies since November 2021. LHGP has specialist capabilities in the key areas for the Phase 1 Project, being Africa, the UAE, Europe and the United States. Engagement with debt providers is well advanced, which has led to a target debt range of 60% to 70% of the total funding requirement being considered for the integrated Project.

Engagement with commercial banks, development finance institutions ("DFIs"), export credit agencies ("ECA") and strategic investors is ongoing for a full Project funding solution, with the objective of securing commitments in the March 2023 quarter.

The Managing Director has authorised this announcement for release to the market.

Further Information

For further information, please contact

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About Lepidico Ltd

Lepidico is an innovative developer of sustainable lithium hydroxide and other critical minerals, and the global leader in lithium mica processing.

With a tech-focused, ESG-led business model that is pilot-proven, our first lithium production – from far less contested mineral sources – is due in 2025. The Phase 1 Project will provide a meaningful contribution to decarbonisation the world's alkali metals supply chains. We are also working to grow our business with our second project, Phase 2. Other businesses have already begun to licence our patented-protected L-Max[®] and LOH-Max[®] technologies providing an avenue for royalty revenues.

For more information, [please visit our website](#).

Exploration and Resources

The information in this report that relates to Exploration Results is based on information compiled by Mr Tom Dukovcic, who is a full-time employee of the Company and a member of the Australian Institute of Geoscientists and who has sufficient experience relevant to the styles of mineralisation and the types of deposit under consideration, and to the activity that has been undertaken, 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." Mr Dukovcic consents to the inclusion in this report of information compiled by him in the form and context in which it appears.

The information in this report that relates to the Helikon 2 - Helikon 5 Mineral Resource estimates is extracted from an ASX Announcement dated 16 July 2019 ("Drilling Starts at the Karibib Lithium Project") and was completed in accordance with the guidelines of the JORC Code (2012). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original market announcement.

The information in this report that relates to the Helikon 1 and Rubicon Ore Reserve is based on information compiled by John Wyche who is a Fellow of the Australasian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience which is relevant to the type of deposit and mining method under consideration and to the activity to which 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." Mr Wyche is an employee of Australian Mine Design and Development Pty Ltd which is an independent consulting company. He consents to the inclusion in the report of the information compiled by him in the form and context in which it appears.

Forward-looking Statements

All statements other than statements of historical fact included in this release including, without limitation, statements regarding future plans and objectives of Lepidico, are forward-looking statements. Forward-looking statements can be identified by words such as "anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will" and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, its directors and management of Lepidico that could cause Lepidico's actual results to differ materially from the results expressed or anticipated in these statements. The Company cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this release will actually occur and investors are cautioned not to place any reliance on these forward-looking statements. Lepidico does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this release, except where required by applicable law and stock exchange listing requirements.

Appendix I



Ore Reserves Statement

Karibib Project

Namibia

As at 15 July 2022



Prepared by Australian Mine Design and Development Pty Ltd

for

Lepidico Limited

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Effective Date: 15 July 2022

Submitted Date: 15 July 2022

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1 ORE RESERVES STATEMENT

1.1 SCOPE

The July 2022 Ore Reserves Estimate was prepared for Lepidico Limited by Australian Mine Design and Development Pty Ltd (AMDAD). It deals with the Mineral Resource for the Karibib deposit in Namibia as at 27th May 2020. It is an update of the May 2020 Ore Reserve Estimate.

The Ore Reserves are based on extraction by open pit mining. Ore will be beneficiated on site to produce a lithium rich concentrate consisting mainly of the lithium bearing mineral lepidolite. The lepidolite concentrate will be transported to the United Arab Emirates to be treated in Lepidico's patented LOH-Max[®], L-Max[®] and S-Max[®] processes to produce battery grade lithium hydroxide or lithium carbonate and saleable by-products including amorphous silica and sulphate of potash. The Feasibility Study for the chemical processing facility and the integrated Phase 1 Project inclusive of the Karibib Project was completed in May 2020.

There has been no change to the May 2020 Mineral Resource Estimate. Changes to the Ore Reserves Estimate are due to a decrease in the cut off grade based on updated product pricing and improved confidence in project costs and recoveries following pilot plant testing and further cost estimation.

No mining has been undertaken since May 2020 so there is no depletion of the Mineral Resource. The changed cut off grade did not warrant changes to the May 2020 pit designs so the total volume mined is the same.

The Ore Reserves include pits on two deposits named Rubicon and Helikon 1 which are separated by approximately 6.5km. Small scale historical mining has been conducted on both deposits. The target mineral was mainly petalite which is associated with the lepidolite but tends to occur separately in the pegmatites leaving most of the lepidolite, which is the target mineral for the current project, in place. At Rubicon there is a shallow opencut with shallow underground workings mined off the highwall. At Helikon 1 there is a shallow opencut.

1.2 CONTRIBUTING PERSONS

The May 2020 Ore Reserve Statement prepared by AMDAD was supported by contributions from the persons listed in Table 4. Their contributions are still relied on. The only changes since May 2020 are mining processing and general operating costs and process recoveries.

1.3 ACCORD WITH JORC CODE

This Ore Reserves Statement has been prepared in accordance with the guidelines of the Australasian Code for the Reporting of Resources and Reserves 2012 Edition (the JORC Code 2012).

The Competent Person signing off on the overall Ore Reserves Estimate is Mr John Wyche, of Australian Mine Design and Development Pty Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy and who has 33 years of relevant experience in operations and consulting for open pit industrial minerals and metalliferous mines.



1.4 ORE RESERVES SUMMARY

The Ore Reserve Estimate is summarised in Table 1.

Table 1 Karibib Lithium Project Ore Reserves

Pit	Mt	Li ₂ O %	Rb ppm	Cs ppm	Ta ppm	K %
Rubicon Pit						
Proved	1.60	0.50	2576	312	44	2.15
Probable	4.99	0.33	1866	204	31	2.13
Pit Total	6.59	0.37	2038	230	34	2.14
Waste	21.57					
Waste:Ore Ratio	3.3					
Helikon 1 Pit						
Proved	0.69	0.58	2234	458	54	1.73
Probable	0.99	0.46	2028	478	68	1.68
Pit Total	1.68	0.51	2113	470	62	1.70
Waste	2.22					
Waste:Ore Ratio	1.3					
Total Project						
Proved	2.29	0.52	2472	356	47	2.02
Probable	5.98	0.35	1893	249	37	2.06
Total Ore	8.27	0.40	2053	279	40	2.05
Waste	23.79					
Waste:Ore Ratio	2.9					

Notes:

1. The tonnes and grades shown in the totals rows are stated to a number of significant figures reflecting the confidence of the estimate. The table may nevertheless show apparent inconsistencies between the sum of components and the corresponding rounded totals.
2. The deposit has been assessed based on lithium grades in parts per million. For consistency with other projects the Ore Reserve grades are presented in terms of Li₂O %. 1% Li₂O is equal to 4645 ppm Li.

1.5 SUMMARY OF MINE PLAN

The target ore zones are within pegmatite sills formed in granite host rock. The Rubicon orebody dips at 20° to 30° to the north east. The Helikon 1 orebody dips at 50° to 60° to the NNE. Rubicon ore grade zones have true widths of 5 to 15 metres. Helikon 1 ore true widths are 5 to 20 metres. The Rubicon pit will mine the orebody over a strike length of 750 metres and at Helikon 1 ore will be mined over a 360 metre strike length.

Most of the target lithium mineralisation occurs as lepidolite which is contained entirely within the sills. Recoverable lithium is also present in associated micaceous lithium bearing minerals such as zinnwaldite. Four ore types are defined based on the occurrence and abundance of lithium mica minerals, principally lepidolite:

- Massive lepidolite,



- Disseminated lepidolite,
- Mica, and
- Pegmatite.

Flotation test work has demonstrated that acceptable lepidolite concentrate grades can be achieved from all four ore types down to relatively low lithium head grades.

Mining will be by a conventional excavator and truck operation with most of the ore and waste requiring drilling and blasting.

Ore from the pits will be beneficiated by flotation on site to produce a lepidolite concentrate. The concentrate will be transported from Karibib to Lepidico's proposed Phase 1 Lithium Chemical Plant at in the United Arab Emirates (UAE). The Ore Reserve is based on use of the LOH-Max® process at the chemical plant to produce battery grade lithium hydroxide monohydrate and saleable by-products including amorphous silica and sulphate of potash.

Mining rates are based on the tonnage and grade of concentrate produced by flotation as feed stock for the chemical plant. For the first four years mining focuses on high grade massive and disseminated lepidolite with target concentrate production of 57,671 tpa. Shallow high grade ore tonnes allow this to be achieved at low total mining rates of 600 to 800 ktpa ore and waste. The concentrator feed rate is 333 ktpa.

After Year 4 most of the high grade ore is depleted and the proportion of low grade mica and pegmatite increases. These ore types produce a lower lithium grade concentrate at a lower mass recovery. The chemical plant concentrate target feed rate increases to 66,577 tpa. The concentrator target feed rate to produce this increases to 541 ktpa in Years 5 to 7 then to 650 ktpa from Year 8. Deeper pits and increasing ore tonnes increase the total mining rates to 1.0 to 1.6 Mtpa in Years 5 to 9. When the final Rubicon pit pushback is commenced in Year 10 the mining rate peaks at over 4.3 to 6.6 Mtpa in Year 10 to 12 before gradually reducing from Year 13 to the completion of mining in Year 16.

In addition to the unmined ore tonnes in this ore reserve there are approximately 770 kt in surface stockpiles from former mining and bulk sampling. Sampling indicates that these have recoverable lithium grades sufficient for profitable processing. These are not included in the current Mineral Resource Estimate so cannot be included in the Ore Reserves.

1.6 CHANGES FROM MAY 2020

Changes to the Ore Reserves inputs from May 2020 to July 2022 are shown in Table 2.

Changes to the Ore Reserves Estimate from May 2020 to July 2022 are shown in Table 3.



Table 2 Changes to Inputs May 2020 to July 2022

Changed Inputs		2020 DFS			May 2022		
Ore Type		Lep Z	Lep Z B	Mica	Lep Z	Lep Z B	Mica
Maximum Concentrator Feed Rate	ktpa	360	360	650	333	333	649
OPERATING COSTS							
Mining							
Mining - waste Rubicon	\$/t	2.57	2.57	2.57	3.51	3.51	3.51
Mining - waste Helikon 1	\$/t	2.57	2.57	2.57	3.19	3.19	3.19
Mining - ore Rubicon to ROM Pad	\$/t	2.90	3.00	3.00	3.96	3.96	3.96
Mining - ore Helikon 1 to ROM Pad	\$/t	3.98	3.98	3.98	5.02	5.02	5.02
ROM ore rehandle	\$/t	0.86	0.86	0.86	1.22	1.22	1.22
Site Costs - Karibib							
Mica Concentrator	\$/t ore	26.34	26.34	22.88	25.01	25.01	16.16
Administration - personnel	\$/t ore	2.46	2.46	1.36	5.43	5.43	2.78
Administration - other	\$/t ore	1.97	1.97	1.09	2.57	2.57	1.32
Logistics freight							
Mica conc FOB component	\$/t conc.	49.00			53.00		
Mica conc from FOB to destination	\$/t conc.	63.00			71.95		
Phase 1 Chemical Plant	\$/t conc.	399.00			434.00		
PRODUCTION							
Mica concentrate							
Recovery - Li	%	90.00%	85.00%	75.00%	88.40%	85.60%	74.60%
Concentrate grade - Li	%Li	1.80%	1.60%	1.35%	1.80%	1.36%	1.17%
Recovery - Cs	%	80.00%	70.00%	65.00%	88.80%	79.50%	78.60%
Chemical Plant							
LiOH monohydrate recovery	%	90.00%	90.00%	90.00%	89.40%	89.40%	89.40%
LiOH monohydrate grade	%LiOH.H2O	99.50%	99.50%	99.50%	99.00%	99.00%	99.00%
Cs recovery to Cs sulphate brine	%	89.60%	89.60%	89.60%	83.00%	83.00%	83.00%
Cs grade in Cs sulphate brine	%	42.28%	42.28%	42.28%	43.32%	43.32%	43.32%
Final Products							
LiOH.H2O productions rate	tpa	5,680			5,680		
Amorphous silica (pure basis)	tpa	39,000			32,493		
SOP Product	tpa	9,097			8,987		
Caesium sulphate brine	tpa	159			316		
Rb sulphate brine	tpa	800			1,375		
Gypsum rich residue	tpa	121,000			136,523		
Residue moisture	%	28.00%			26.00%		
REVENUES							
Lithium hydroxide	\$/t	13,000			17,015		
Amorphous silica	\$/t	100			50		
Sulphate of Potash	\$/t	650			530		
Caesium sulphate brine	\$/t	8,571			25,000		



Table 3 Changes to Ore Reserves May 2020 to July 2022

Pit	May 2020		July 2022	
	Mt	Li2O %	Mt	Li2O %
Rubicon Pit				
Proved	1.38	0.55	1.60	0.50
Probable	3.94	0.38	4.99	0.33
Pit Total	5.32	0.43	6.59	0.37
Waste	22.84		21.57	
Waste:Ore Ratio	4.3		3.3	
Helikon 1 Pit				
Proved	0.55	0.69	0.69	0.58
Probable	0.85	0.51	0.99	0.46
Pit Total	1.4	0.58	1.68	0.51
Waste	2.51		2.22	
Waste:Ore Ratio	1.8		1.3	
Total Project				
Proved	1.93	0.59	2.29	0.52
Probable	4.79	0.41	5.98	0.35
Total Ore	6.72	0.46	8.27	0.40
Waste	25.35		23.79	
Waste:Ore Ratio	3.8		2.9	

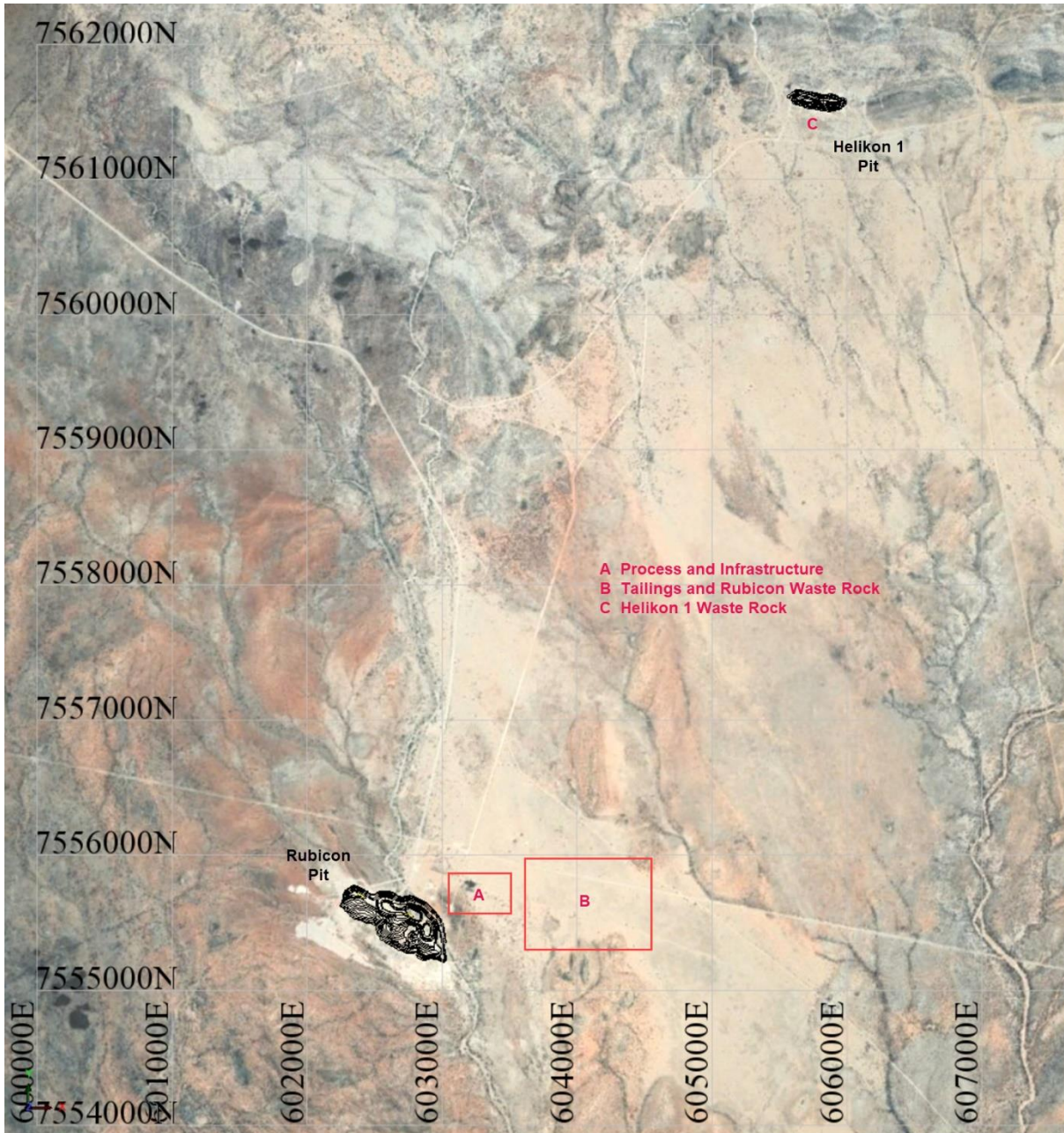


Figure 1 Current Mine Area



Figure 2 Rubicon Final Pit

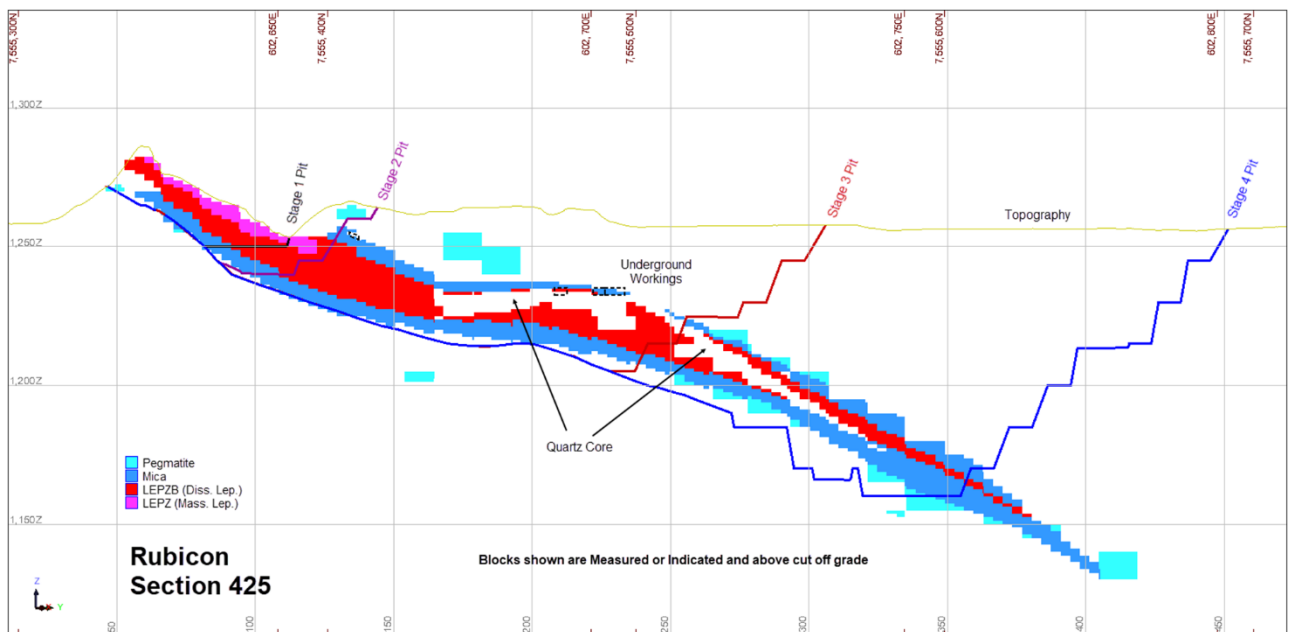


Figure 3 Rubicon Pit Cross Section

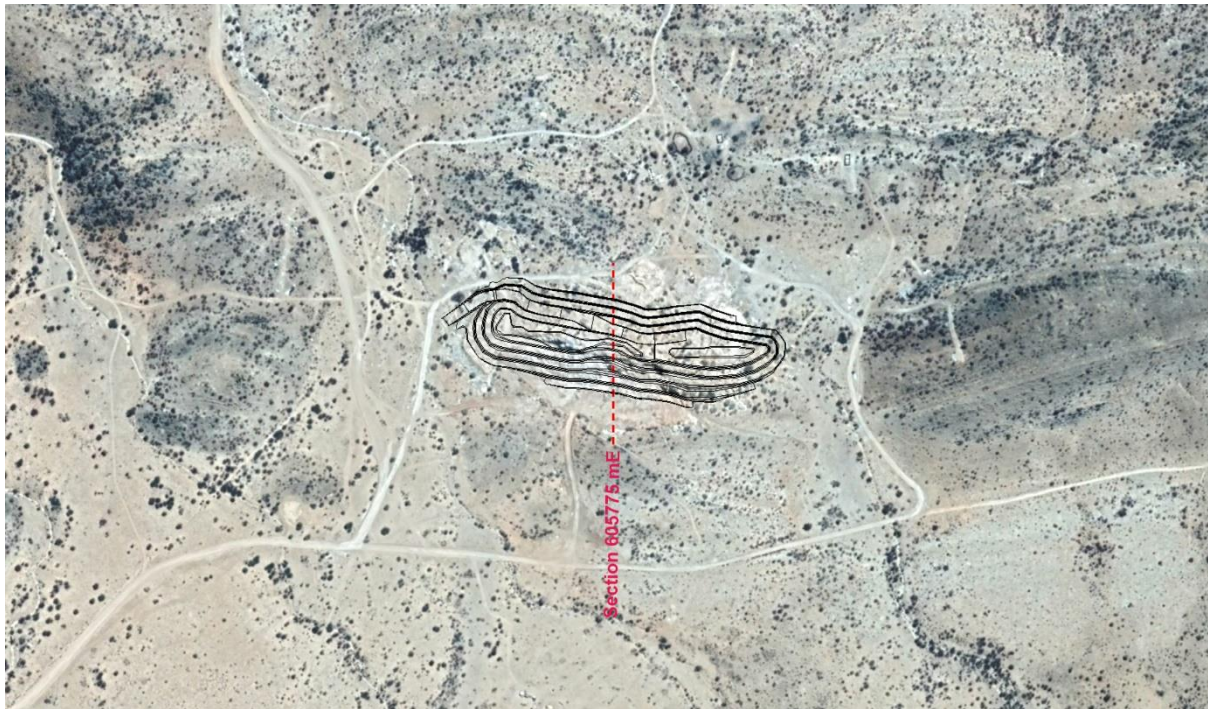


Figure 4 Helikon1 Final Pit

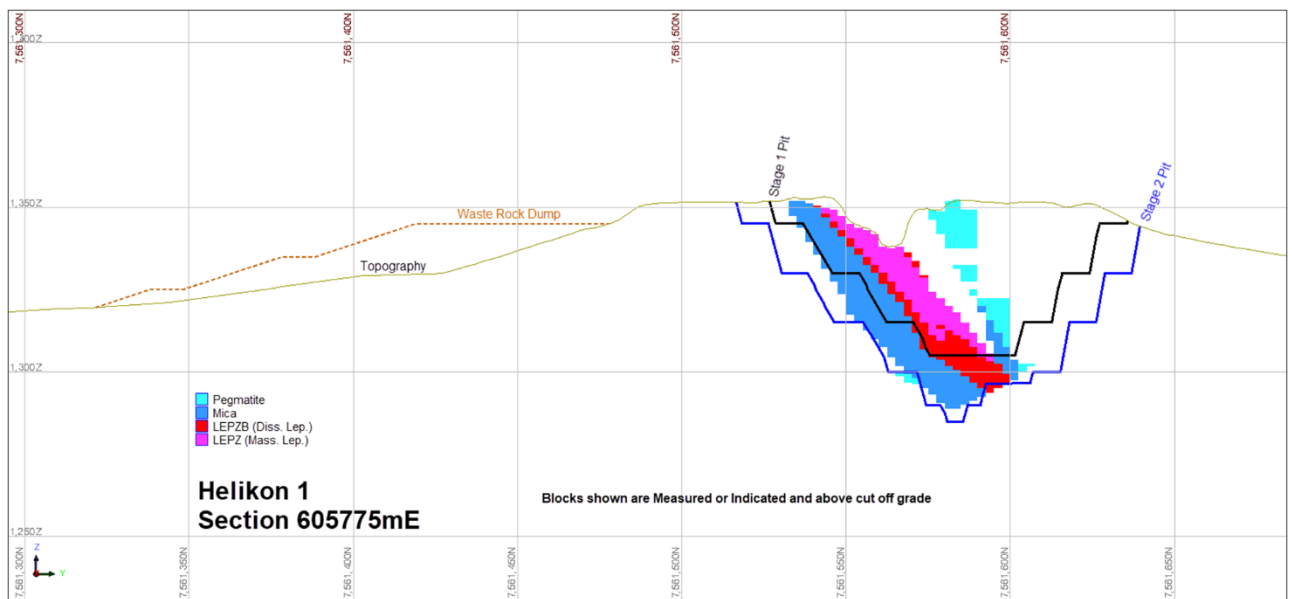


Figure 5 Helikon1 Pit Cross Section



Table 4 Contributing Experts

Expert Person/Company	Area of Expertise	References / Information Supplied
Andrew Scogings Snowden Mining Industry Consultants	Mineral resource estimation	Karibib Lepidolite Deposit Mineral Resource Estimate, January 2020
Guy Grocott Pells Sullivan Meynink Pty Ltd	Geotechnical engineering	Karibib Lithium Project, Stage 2 Open Pit Geotechnical Feasibility Assessment, PSM3930-002R, 19 March 2020
Robert Harris Project Definition Pty Ltd	Opencut mining costs Lepidolite concentrate transport costs	Opencut mining costs per tonne for ore and waste. Concentrate transport logistics and costs from Karibib to the UAE.
Peter Walker Lepidico Limited	Metallurgy	Summary of metallurgical studies and test work. L-Max® Phase 1 (Flotation) Variability Testwork report, Strategic Metallurgy, November 2018 L-Max® Pilot Plant report, Strategic Metallurgy, September 2019, (RP_ALV_L-Max Pilot_Rev_01) and subsequent progress reports to produce by-products and battery grade lithium chemicals using the LOH-Max®, L-Max® and S-Max® processes.
Peter Walker Lepidico Limited	Environmental	Summary of Karibib water and waste rock management studies by Knight Piesold. Existing Environment Impact Assessments and Environmental Management Plans Risk Based Solutions CC
Peter Walker Lepidico Limited	Karibib Project and UAE process and infrastructure engineering and operating and capital cost estimation	Karibib Mineral Concentrator Feasibility Study 2020, Lycopodium Minerals PL Concentrator and administration costs prepared by Lepidico Ltd
Peter Walker Lepidico Limited	Commercial	Lithium hydroxide, lithium carbonate and by-product price forecast. Project financial model.
John Wyche AMDAD Pty Ltd	Mining Engineering	Pit optimisation. Opencut mine design. Detailed production scheduling. Competent Person for Ore Reserves.



1.7 ORE RESERVE ASSESSMENT

Table 5 JORC Table 1 Section 4, Estimation and Reporting Ore Reserves

Sections 1, 2 and 3 of the following Table 1 are provided in the report “*Rubicon and Helikon 1 Mineral Resource Estimate, Project Number AU10317, January 2020*” by Snowden Mining Industry Consultants which is attached as an addendum to this maiden Ore Reserves Statement.

JORC Code, 2012 Edition – Table 1

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<ul style="list-style-type: none"> <i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i> <i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i> 	<p>The Mineral Resource Estimate was prepared by Snowden Mining Industry Consultants in January 2020. Details are as set out in Section 3 in the Mineral Resource Estimate attached as an addendum to this Ore Reserves Statement.</p> <p>The resource block models “<i>rub_mod_2001v5.dm</i>” and “<i>hel_mod_2001v4.dm</i>” were used as the basis of the pit optimisation, pit design and production schedule.</p> <p>The Mineral Resources are inclusive of the Ore Reserves.</p>
<i>Site visits</i>	<ul style="list-style-type: none"> <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> <i>If no site visits have been undertaken indicate why this is the case.</i> 	<p>John Wyche visited the Karibib site on 9 and 10 August 2019. Areas inspected included the:</p> <ul style="list-style-type: none"> Existing pits at Rubicon and Helikon 1, Accessible underground voids off Rubicon highwall, Potential process plant, waste rock dump and tailings storage sites, and Site access road from Karibib town. <p>The visit confirmed that assumptions made for the mine design and operations are appropriate for the site logistics, geology and topography.</p>



Criteria	JORC Code explanation	Commentary
<p><i>Study status</i></p>	<ul style="list-style-type: none"> <i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i> <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i> 	<p>The Ore Reserves have been compiled as part of a Feasibility Study (FS) which covers all aspects of the project:</p> <ul style="list-style-type: none"> Mineral resource estimation, Geotechnical assessment of pit wall slopes, Process definition and test work for beneficiation of the lithium mineral lepidolite by flotation at Karibib, Transportation of the lepidolite concentrate to the proposed lithium chemical plant in Abu Dhabi, Process definition and test work for the LOH-Max®, L-Max® and S-Max® processes to produce battery grade lithium hydroxide or lithium carbonate and saleable by-products, Opencut mine planning for two pits and the associated waste rock dumps, Water and waste rock management for the Karibib site, Marketing of the lithium battery products and by-products, Operating and capital cost estimates, Financial modelling, Environmental impact assessment and permitting.
<p><i>Cut-off parameters</i></p>	<ul style="list-style-type: none"> <i>The basis of the cut-off grade(s) or quality parameters applied.</i> 	<p>Cut off grades are expressed in lithium parts per million (Li ppm). They are estimated on the basis of producing battery grade lithium hydroxide mono hydrate (LiOH.H₂O) with by-products of amorphous silica and sulphate of potash (SOP).</p> <p>The opencut cut mine uses a marginal cut off grade which compares the cost of processing 1 tonne of material against the revenue derived after applying process recoveries. The costs are:</p> <ul style="list-style-type: none"> Any additional costs of mining the material as ore instead of waste, Beneficiation of the ore by flotation in the Karibib concentrator,



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> • General and administration costs for the Karibib Project, • Transport of the lepidolite concentrate to Abu Dhabi, • Application of the LOH-Max® process in Abu Dhabi, and • Payment of a Namibian royalty on the lepidolite concentrate. <p>Revenues are calculated using sale prices of:</p> <ul style="list-style-type: none"> • LiOH.H₂O US\$17,015 per tonne (long term) • Amorphous silica US\$50 per tonne • SOP US\$530 per tonne, and • Caesium sulphate brine US\$25,000 per tonne. <p>LiOH.H₂O per tonne of ore is dependent on the lithium head grade and the ore type.</p> <p>Amorphous silica and SOP are by-products of the L-Max® and LOH-Max® processes and are produced in fixed proportions to the LiOH.H₂O production.</p> <p>Caesium brine production is dependent on the caesium head grade.</p> <p>The marginal cut-off grade is the lithium ppm where the value of the final products equals the total of the costs above. The massive lepidolite, disseminated lepidolite and mica/pegmatite ore types have different recoveries to concentrate and different concentrate grades resulting in differing cut off grades. Ore from Helikon 1 is trucked 7km to the concentrator at Rubicon and the cost of this is added to the Helikon 1 ore thereby raising its cut off grade slightly.</p> <p>After including all the costs, recoveries and revenues the cut off grades</p>



Criteria	JORC Code explanation	Commentary																																																							
		<p>across the deposits are:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th></th> <th>Massive Lepidolite</th> <th>Disseminated Lepidolite</th> <th>Mica / Pegmatite</th> </tr> </thead> <tbody> <tr> <td colspan="5">Rubicon</td> </tr> <tr> <td>Head Grade</td> <td>Li ppm</td> <td>551</td> <td>655</td> <td>530</td> </tr> <tr> <td></td> <td>Li2O %</td> <td>0.12%</td> <td>0.14%</td> <td>0.11%</td> </tr> <tr> <td>Insitu Resource Grade</td> <td>Li ppm</td> <td>578</td> <td>688</td> <td>556</td> </tr> <tr> <td></td> <td>Li2O %</td> <td>0.12%</td> <td>0.15%</td> <td>0.12%</td> </tr> <tr> <td colspan="5">Helikon 1</td> </tr> <tr> <td>Head Grade</td> <td>Li ppm</td> <td>573</td> <td>681</td> <td>563</td> </tr> <tr> <td></td> <td>Li2O %</td> <td>0.12%</td> <td>0.15%</td> <td>0.12%</td> </tr> <tr> <td>Insitu Resource Grade</td> <td>Li ppm</td> <td>601</td> <td>715</td> <td>591</td> </tr> <tr> <td></td> <td>Li2O %</td> <td>0.13%</td> <td>0.15%</td> <td>0.13%</td> </tr> </tbody> </table>			Massive Lepidolite	Disseminated Lepidolite	Mica / Pegmatite	Rubicon					Head Grade	Li ppm	551	655	530		Li2O %	0.12%	0.14%	0.11%	Insitu Resource Grade	Li ppm	578	688	556		Li2O %	0.12%	0.15%	0.12%	Helikon 1					Head Grade	Li ppm	573	681	563		Li2O %	0.12%	0.15%	0.12%	Insitu Resource Grade	Li ppm	601	715	591		Li2O %	0.13%	0.15%	0.13%
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<p><i>Mining factors or assumptions</i></p>	<ul style="list-style-type: none"> • <i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i> • <i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i> • <i>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.</i> • <i>The major assumptions made, and Mineral Resource model used for pit and stope optimisation (if appropriate).</i> • <i>The mining dilution factors used.</i> • <i>The mining recovery factors used.</i> • <i>Any minimum mining widths used.</i> • <i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i> • <i>The infrastructure requirements of the selected mining methods.</i> 	<p>Opencut Mining</p> <p>Opencut mining will be conventional methods using hydraulic excavators and mining trucks. All material mined will require blasting. There will be areas of narrow benches during the initial months of mining around the existing pits but wider benches will be available after a few months.</p> <p>For the first half of the mine life required mining rates are relatively low so small sized excavators and trucks can be used. Small machines are well suited to the initial pit development work. Mining rates increase in the second half of the mine life as the final pushback is mined. This pushback will have broad benches many of which will be mostly waste rock. There will be a requirement for more or larger mining machines in this period.</p> <p>Pit stage designs for Rubicon and Helikon 1 accommodate ramp access between stages.</p> <p>Pit wall slopes are based on a Feasibility Study level geotechnical analysis by Pells Sullivan Meynink. Both pits tend to follow the orebody down dip so the highest walls are cut across the dip which will promote stability.</p> <p>Grade control will be by a combination of visual control during mining and</p>																																																							



Criteria	JORC Code explanation	Commentary
		<p>assaying of blast hole samples. The high grade massive and disseminated lepidolite zones are visually identifiable from the lower grade pegmatite and the barren quartz core and the surrounding granite host rock. Lithium grades in the lower grade mica and pegmatite ore types are gradational within the sills and will require sampling and assaying to delineate cut off grade boundaries. This is mainly required in the second half of the mine life when the massive and disseminated lepidolite is mostly depleted.</p> <p>Mining loss and dilution are modelled by application of global factors of 95% recovery and 5% dilution at zero grade.</p> <p>The Ore Reserves are derived entirely from Measured and Indicated Mineral Resources. Inferred Mineral Resources are treated as waste rock.</p> <p>The Karibib Feasibility Study includes provision of diesel fuel supply, workshops, explosives storage and other facilities required to support the opencut mining operation. For the first nine years mining rates do not exceed 60 kbcm per month so the infrastructure to support the mining operation is minimal. Rates rise through Year 10 and 11 to a peak of 210 kbcm per month.</p> <p>The Navachab Gold Mine has been operating in the area since 1989. This is a much larger mining operation than the Karibib Project so the supply chains, skills and resources to support mining are already well established.</p>
<p><i>Metallurgical factors or assumptions</i></p>	<ul style="list-style-type: none"> • <i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i> • <i>Whether the metallurgical process is well-tested technology or novel in nature.</i> • <i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i> • <i>Any assumptions or allowances made for deleterious elements.</i> 	<p>The Ore Reserves are based on production of battery grade lithium hydroxide monohydrate (LiOH.H₂O) with by-products of amorphous silica, sulphate of potash (SOP) and rubidium/caesium brine. The general processing path is:</p> <ul style="list-style-type: none"> • Beneficiation of the ROM ore by crushing, grinding and flotation in a concentrator at the Karibib mine site. The lepidolite concentrate will grade approximately:



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i> <i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i> 	<ul style="list-style-type: none"> ○ 1.80% lithium from massive lepidolite ○ 1.36% lithium from disseminated lepidolite ○ 1.17% lithium from the mica/pegmatite ore types. <ul style="list-style-type: none"> The lepidolite concentrate will be transported to a chemical plant to be constructed in the UAE. The chemical plant will use Lepidico's patented L-Max®, LOH-Max® and S-Max® processes to produce battery grade LiOH.H₂O with by-products of amorphous silica, sulphate of potash and caesium brine. <p>The L-Max® was developed by Lepidico to extract lithium from lepidolite mica concentrates and then purify leach solution for production of battery grade lithium chemicals. The LOH-Max® process was developed by Lepidico to produce battery grade LiOH.H₂O from the purified leach solution. It has never been applied on a commercial scale. The recoveries, consumables and costs in Lepidico's production and financial models are derived from extensive bench scale testing and continuous pilot plant operation processing. The products from the pilot plant have subsequently being tested to demonstrate by-products at marketable qualities and battery grade lithium chemicals.</p>
<p><i>Environmental</i></p>	<ul style="list-style-type: none"> <i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i> 	<p>The Karibib Project will be developed on an existing Mining License (ML204). An Environmental Impact Assessment (EIA) was completed in 2017 by Risk Based Solutions (RBS) CC and an Environmental Compliance Certificate (ECC) granted for a period of three years. This was renewed in October 2020.</p> <p>The environmental permit was approved and granted in February 2021 and was renewed in February 2022.</p>
<p><i>Infrastructure</i></p>	<ul style="list-style-type: none"> <i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the</i> 	<p>ADP Namibia Pty Ltd have completed front end engineering design of the mineral processing plant and associated infrastructure including non-process buildings. Water supply will be from an existing borefield.</p>



Criteria	JORC Code explanation	Commentary
	<p><i>infrastructure can be provided or accessed.</i></p>	<p>Addiza Power Consultants have completed the design of the power supply overhead line to be connected to the national grid.</p> <p>Knight Piesold have completed design of upgrades required to the existing local road infrastructure, design of the site bulk earthworks and Rubicon waste management area.</p> <p>Lycopodium Minerals Pty Ltd completed the Feasibility Study of the Phase 1 Chemical Plant in May 2020 and will complete the front end engineering design in August 2022.</p>
<p>Costs</p>	<ul style="list-style-type: none"> • <i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i> • <i>The methodology used to estimate operating costs.</i> • <i>Allowances made for the content of deleterious elements.</i> • <i>The source of exchange rates used in the study.</i> • <i>Derivation of transportation charges.</i> • <i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i> • <i>The allowances made for royalties payable, both Government and private.</i> 	<p>The opencut mining costs have been estimated by Robert Harris of Project Definition Pty Ltd using local cost inputs and industry standards.</p> <p>Lycopodium Minerals Pty Ltd/ADP Namibia have estimated the capital costs of the process plant and facilities using quoted equipment prices, local installation rates and material take-off factoring.</p> <p>Lepidico have estimated the operating costs for the process plant and administration based on local unit rates.</p> <p>Concentrate transport costs were estimated by Robert Harris.</p> <p>Lycopodium Minerals Pty Ltd estimated the capital costs of the Phase 1 Chemical Plant in a Feasibility Study completed in May 2020 incorporating learnings from the Pilot Plant operation in 2019. The front end engineering design completed in 2022 incorporates learnings from the pilot plant operation completed on Karibib ore in 2022.</p> <p>Lepidico have estimated the operating costs for the Phase 1 Chemical Plant and based on pilot plant testing using local UAE unit rates.</p>
<p>Revenue factors</p>	<ul style="list-style-type: none"> • <i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i> • <i>The derivation of assumptions made of metal or commodity price(s),</i> 	<p>Current basis of pricing for:</p> <ul style="list-style-type: none"> • Forecast pricing for lithium hydroxide has been provided by Benchmark Minerals Intelligence. • By-product pricing in the UAE for amorphous silica is based on



Criteria	JORC Code explanation	Commentary
	<i>for the principal metals, minerals and co-products.</i>	<p>Lepidico marketing intelligence and SOP is based on Argus forecast estimates.</p> <ul style="list-style-type: none"> The pricing for the caesium sulphate brine has been established by engagement with the principal end users being chemical companies producing caesium doped catalysts.
<i>Market assessment</i>	<ul style="list-style-type: none"> <i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i> <i>A customer and competitor analysis along with the identification of likely market windows for the product.</i> <i>Price and volume forecasts and the basis for these forecasts.</i> <i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i> 	<p>Market assessment for lithium chemicals supply and demand projection has been provided by Benchmark Minerals Intelligence.</p> <p>Market assessment in the UAE for amorphous silica is based on feedback from potential UAE customers.</p> <p>Market assessment for SOP is based on the Argus long term real price (2025 onwards) for crystalline grade product.</p> <p>The market assessment for the caesium sulphate brine is based on negotiations with catalyst manufacturers (Cs doped vanadium pentoxide).</p>
<i>Economic</i>	<ul style="list-style-type: none"> <i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i> <i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i> 	<p>A monthly life of mine schedule was prepared for the mining operation and used by Lepidico as the basis of the project financial model. The model version assumes that Karibib is the only feed source for the UAE Phase 1 Lithium Chemical Plant so the net revenue generated from Karibib must cover the cost of developing the facilities in Namibia and the UAE.</p> <p>The Base Case model returns a positive after tax NPV at an 8% discount rate. The project life is 16 years and the payback period is under 5 years. The project is most sensitive to the lithium hydroxide price. The next most sensitive item is the Phase 1 Lithium Chemical Plant operating cost. It is not highly sensitive to the concentrator and mining costs at Karibib.</p> <p>The Phase 1 Chemical Plant in the UAE will be designed to process mica concentrate from multiple feed sources. Additional longer life feed sources enhance the returns from the integrated project.</p> <p>The Karibib model returns a positive value as a standalone project based</p>



Criteria	JORC Code explanation	Commentary
		on reasonable financial assumptions.
<i>Social</i>	<ul style="list-style-type: none"> <i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i> 	<p>Lepidico has established stakeholder engagement at all levels of government in Namibia.</p> <p>Lepidico has completed socio-economic surveys of four local communities in 2020. The results will inform community and social support and communication strategy and programs.</p> <p>Lepidico has received a no objection certificate to develop the project from the owner of the Okongava Farm, the location of the Karibib Project; the owner being the Ministry of Agriculture, Water and Land Reform.</p>
<i>Other</i>	<ul style="list-style-type: none"> <i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i> <i>Any identified material naturally occurring risks.</i> <i>The status of material legal agreements and marketing arrangements.</i> <i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</i> 	<p>The Karibib Project has been defined at a Feasibility Level of confidence based on Measured and Indicated Mineral Resources. Ongoing work on the Namibian and UAE aspects of the project will continue to improve confidence. A large body of work has been done on processing aspects of lepidolite concentration and the Phase 1 Lithium Chemical Plant which are common to all the potential lepidolite feed sources. The following issues specific to Karibib are noted for further definition to improve overall confidence:</p> <ul style="list-style-type: none"> Some areas of the historical underground workings at Rubicon are flooded and were not included in the 2019 void survey. While these workings are not likely to be extensive and their positions are approximately known, care will be required during opencut mining to avoid bench floor failures. Some of the historical underground workings off the Rubicon highwall have substantial height and width and can be as close as 5 to 10 metres from surface. The target lepidolite zone is generally in the floor of these workings. Care will be required when collapsing the benches above the voids.
<i>Classification</i>	<ul style="list-style-type: none"> <i>The basis for the classification of the Ore Reserves into varying</i> 	Only Measured or Indicated Mineral resources are considered in the Ore



Criteria	JORC Code explanation	Commentary
	<p><i>confidence categories.</i></p> <ul style="list-style-type: none"> • <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> • <i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i> 	<p>Reserve Estimate.</p> <p>Proved Ore Reserves are derived only from Measured Mineral Resources. Probable Ore Reserves are derived only from Indicated Mineral Resources. No issues were identified to warrant classifying any of the Ore Reserves derived from Measured Mineral Resources as Probable.</p> <p>In the opinion of the Competent Person when taken as a whole the modifying factors have been defined to a level of confidence commensurate with a Proved or Probable Ore Reserve. While further work during project development will continue to improve confidence there are no issues currently identified which are likely to have a material impact on the viability of the project and the Ore Reserves as stated.</p>
<p><i>Audits or reviews</i></p>	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of Ore Reserve estimates.</i> 	<p>No audits of the Ore Reserves have been undertaken.</p>
<p><i>Discussion of relative accuracy/confidence</i></p>	<ul style="list-style-type: none"> • <i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i> • <i>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.</i> • <i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i> • <i>It is recognised that this may not be possible or appropriate in all</i> 	<p>Although historical mining has taken place at the Karibib Project the data available is inadequate to form meaningful reconciliations of production against the Mineral Resource model.</p> <p>From a Mineral Resource perspective confidence is commensurate with Measured and Indicated Resources with respect to the lithium grade distribution, sill thickness and structure.</p> <p>The proposed opencut mining method is conventional and well understood. Reliability of the mining models is mainly dependent on the Mineral Resource model. Required production rates are relatively small for the equipment proposed which should allow mine operators to adapt to actual conditions encountered.</p> <p>While the processing methods are new, they have been extensively tested at bench and pilot scale.</p> <p>Given the current status of the Mineral Resource model and operations plan the Ore Reserve should be a very good global estimate and a good</p>



Criteria	JORC Code explanation	Commentary
	<p><i>circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p>local estimate in the areas of Measured Resources. Short term variations from the tonnes and grades predicted by the resource model are likely in any new mining operation, particularly as in areas of Indicated Resources but the given the small scale of the operation and well defined geology it is reasonable to expect that operating experience will assist rapid development of reliable short term plans.</p>



1.8 RESOURCE AND RESERVE CATEGORIES – EXPLANATION

According to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition:-

A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve.

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include



application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

The guidelines in the JORC Code state that the term ‘economically mineable’ implies that extraction of the Ore Reserves has been demonstrated to be viable under reasonable financial assumptions. This will vary with the type of deposit, the level of study that has been carried out and the financial criteria of the individual company. For this reason, there can be no fixed definition for the term ‘economically mineable’.

A ‘Probable Ore Reserve’ is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.

A ‘Proved Ore Reserve’ is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.

The guidelines provided in the JORC Code note that “A Proved Ore Reserve represents the highest confidence category of reserve estimate and implies a high degree of confidence in geological and grade continuity, and the consideration of the Modifying Factors. The style of mineralisation or other factors could mean that Proved Ore Reserves are not achievable in some deposits.”

The following figure, from the JORC Code, sets out the framework for classifying tonnage and grade estimates to reflect different levels of geological confidence and different degrees of technical and economic evaluation.

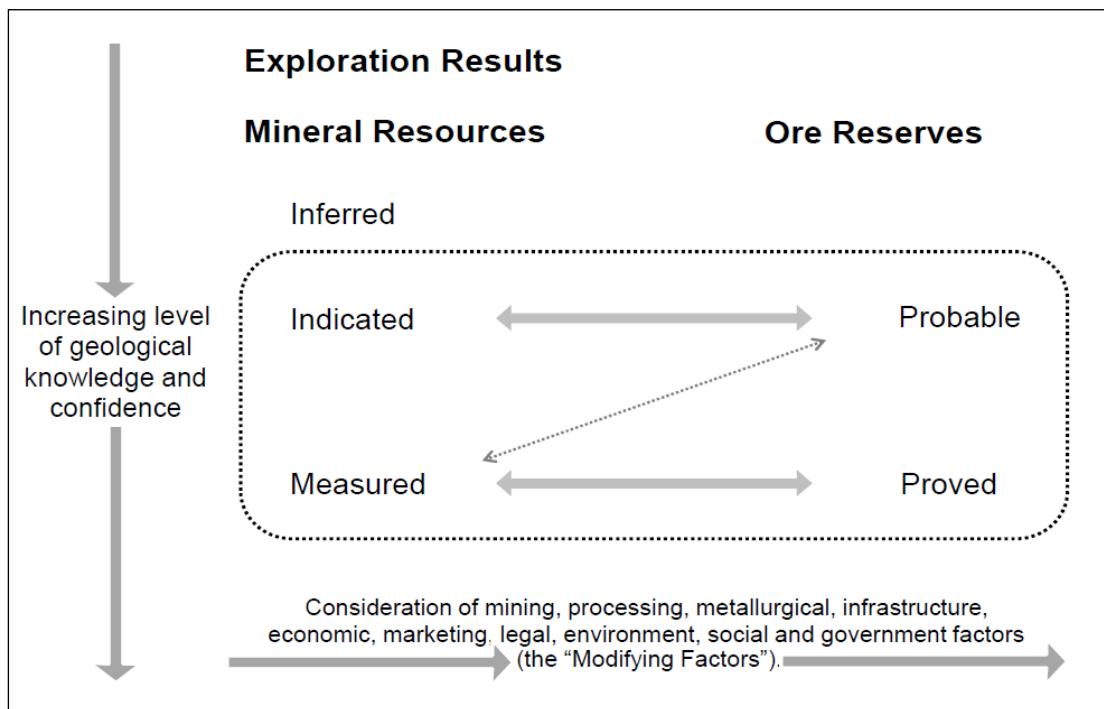


Figure 6 General relationship between Exploration Results, Mineral Resources and Ore Reserves, from 2012 JORC Code Figure 1

Mineral Resources can be estimated on the basis of geoscientific information with some input from other disciplines. Ore Reserves, which are a modified sub-set of the Indicated and Measured Mineral



Resources (shown within the dashed outline in the Figure above), require consideration of the Modifying Factors affecting extraction, and should in most instances be estimated with input from a range of disciplines.

Measured Mineral Resources may be converted to either Proved Ore Reserves or Probable Ore Reserves. The Competent Person may convert Measured Mineral Resources to Probable Ore Reserves because of uncertainties associated with some or all of the Modifying Factors which are taken into account in the conversion from Mineral Resources to Ore Reserves.

Inferred Resources cannot convert to Ore Reserves.