

Sustainable Lithium from micas

Corporate Update:

International Mining and Resources Conference (IMARC), Sydney

October/November 2022



LEPIDICO

Disclaimer

IMPORTANT INFORMATION

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The information is based on publicly available information, internally developed data and other external sources. No independent verification of those sources has been undertaken and where any opinion is expressed in this

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Where the Company expresses or implies an expectation or belief as to the success of future exploration and the economic viability of future projects, such expectation or belief is based on management's current predictions, assumptions and projections. However, such forecasts are subject to risks, uncertainties and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forecasts.

Such risks include, but are not limited to, exploration success, commodity price volatility, future changes to mineral resource estimates, changes to assumptions for capital and operating costs as well as political and operational risks and governmental regulation outcomes. For more detail of risks and other factors, refer to the Company's other Australian Securities Exchange announcements and filings. The Company does not have any obligation to advise any person if it becomes aware of any inaccuracy in, or omission from, any forecast or to update such forecast.

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.

Competent Person Statement

The information in this report that relates to the Helikon 1 and Rubicon Ore Reserve estimates is extracted from an ASX Announcement dated 28 May 2020 ("Definitive Feasibility Study Delivers Compelling Phase 1 Project Results") 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 Rubicon and Helikon 1 Mineral Resource estimates is extracted from ASX Announcements dated 30 January 2020 ("Updated Mineral Resource Estimates for Helikon 1 and Rubicon") and 12 March 2021 ("Karibib Mineral Resource expanded"), which 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 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.



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ASX:LPD

L-MAX®
LOH-Max®

Lepidico is

the global leader in sustainable lithium mica processing, with technologies that deliver superior product quality and have excellent associated environmental & social credentials. Lepidico is set to capture an early-mover advantage in the current cycle.

We are a vertically- integrated producer

Our patented L-Max[®] and LOH-Max[®] technologies have been developed over 10 years. They extract lithium from lepidolite and other lithium micas, opening up a far less contested mineral supply than traditional sources. We deliver high purity lithium hydroxide or carbonate into the supply chain, as well as other in-demand strategic, critical metals caesium and rubidium.

Our Phase 1 project is designed to produce ~5,000tpa LCE, being scaled to make an attractive economic return while managing technical and scale-up risk.

Our technologies

L-Max[®]

The conversion solution
for li-mica minerals

L-Max[®] utilises common use, inexpensive reagents, is energy efficient and utilises conventional equipment operated at atmospheric pressure and modest temperature

By-products include: Critical Minerals caesium and rubidium; potassium sulphate fertiliser (SOP); and amorphous silica

Sustainable; greenhouse gas emissions are c. 25% lower than a typical equivalent integrated spodumene operation and can be best in industry when green H₂ is used; and no solid process waste is generated

Scale-up from pilot to Phase 1 is just c.200x for 5,000tpa LiOH; this will substantially mitigate scale-up risk to large scale, Phase 2 commercial production

Scalable; scoping study for a Phase 2 plant contemplates output of 10,000t to 20,000t pa LCE



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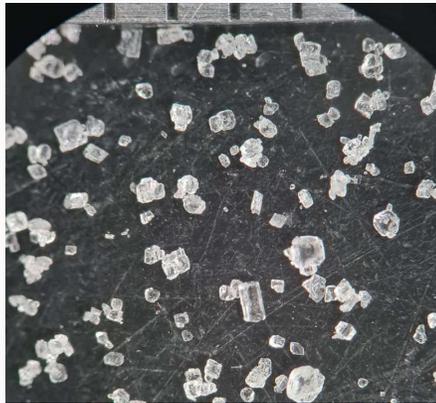
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Our technologies

LOH-Max®

A more sustainable
lithium hydroxide solution



Large cubic shaped clean
crystals $d_{50} \sim 320 \mu\text{m}$

LOH-Max® has broad application including spodumene conversion; it produces high purity lithium hydroxide with excellent morphology from lithium sulphate without generating undesirable sodium sulphate

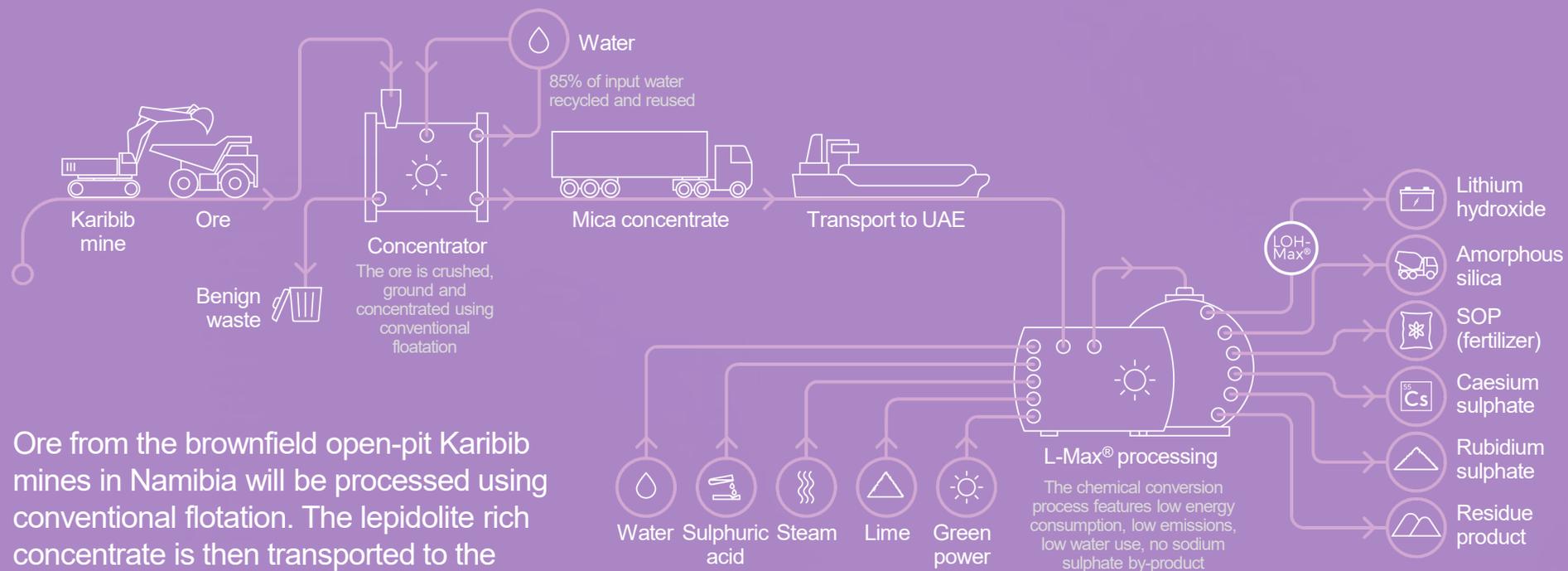
Material reductions for conventional spodumene converters in both capital cost – estimated at more than US\$50 million for 20,000tpa of lithium hydroxide – and operating costs should be achieved using LOH-Max®

Metallurgical recovery enhanced, with an estimated +4% increase in lithium recovery versus conventional spodumene processing

Modest energy consumption supports low greenhouse gas emissions

Benign gypsum rich residue – when combined with L-Max® – may be used as a construction or agricultural product

Lepidico supply chain



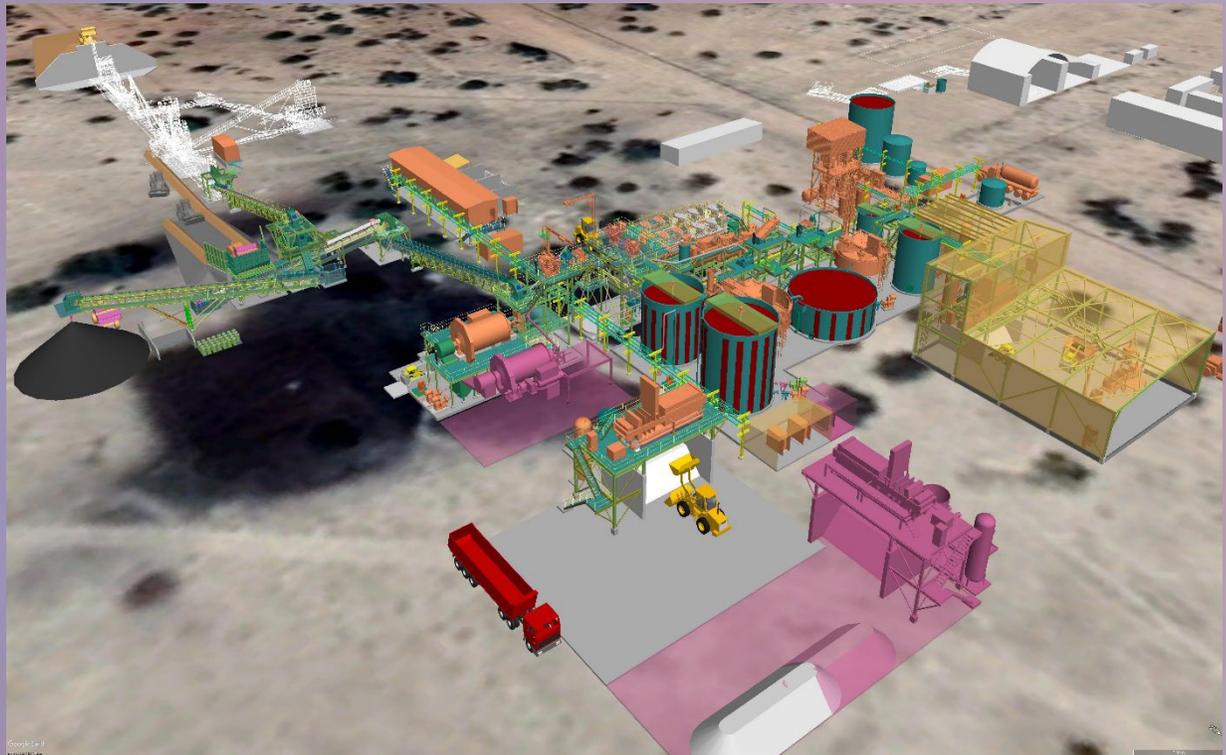
Ore from the brownfield open-pit Karibib mines in Namibia will be processed using conventional flotation. The lepidolite rich concentrate is then transported to the UAE for conversion using our patented technologies. The lithium hydroxide will then be shipped to customers of Traxys under a binding offtake agreement.

Our Phase 1 project

Vertical integration means that Phase 1 will reap the full value chain benefits – from ore mining to fine chemical manufacture – via our proprietary hydrometallurgical technologies that include L-Max[®] and LOH-Max[®].

We will produce and ship lepidolite concentrate from Namibia to the chemical conversion plant at KEZAD in the United Arab Emirates.

The hydrometallurgical conversion plant operates at modest temperature and atmospheric pressure, and has a concentrate capacity of 60,000tpa (tonnes per annum).



Our Phase 1 project

Namibia

- Brownfield re-development of Rubicon & Helikon mines; Ore Reserve 6.8Mt @ 0.46% Li₂O, 320ppm Cs, 0.23% Rb & 2.0% K
- Fully permitted: Granted 68km² Mining Licence
- Construction of 60,000tpa output concentrator
- Access to excellent existing regional infrastructure; 27km power line spur required
- Water rights in place to support 2x expansion
- Large ground position prospective for lithium, caesium & gold
- Mine closure plan will allow these previously abandoned mine sites to be rehabilitated and returned to agricultural use



Timo Ipangelwa

General Manager
Operations Namibia



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Our Phase 1 project

UAE

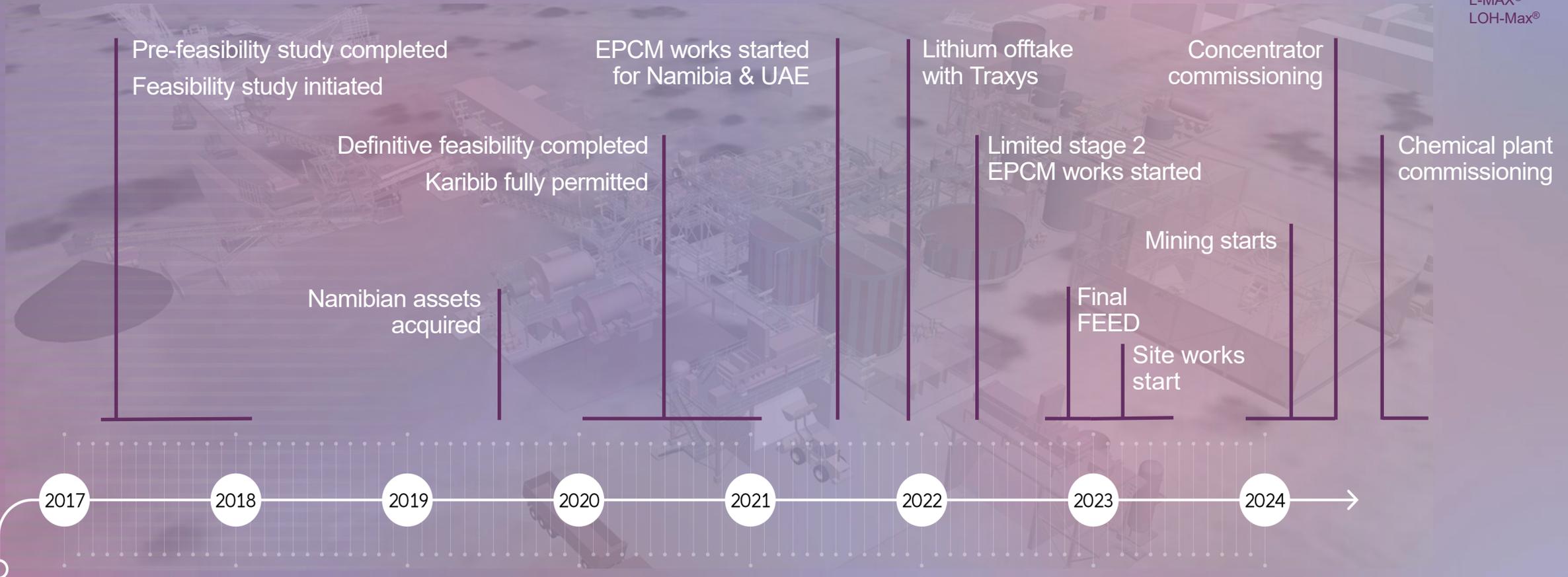
- Located in Khalifa Port Free Trade Zone, Abu Dhabi – no corporate tax and duties; 100% foreign ownership allowed
- 25-year land lease agreement signed 2021
- Abu Dhabi ESIA complete and environmental permit to construct in place
- Exceptional existing shared infrastructure through “plug and play” approach
- Stable and affordable energy, and other bulk consumables locally available
- Commercial green H2 and ammonia supply being fast-tracked for 2024-'26



Hans Daniels

General Manager
Operations UAE

Our Phase 1 project



Phase 1 fundamentals¹

<p>Construction cost (inc. 13% contingency)</p> <hr/> <p>US\$139m</p>	<p>Post tax</p> <hr/> <p>NPV₈ US\$221m</p> <p>NPV₀ US\$521m</p> <p>IRR 31%</p>	<p>Project payback (from start of production)</p> <hr/> <p>3 years</p>	<p>Cooperating costs (by-product LCE basis)</p> <hr/> <p>Cash cost US\$/t 1,656</p> <p>ASIC US\$/t 3,221</p>	<p>Average annual free cash flow³ (post ramp-up)</p> <hr/> <p>US\$49m</p>
<p>Lithium hydroxide production</p> <hr/> <p>4,879 tpa</p>	<p>Sulphate (w) potash production²</p> <hr/> <p>12,000 tpa</p>	<p>Caesium sulphate production²</p> <hr/> <p>240 tpa</p>	<p>Total LCE all products²</p> <hr/> <p>7,060 tpa</p>	<p>Project life</p> <hr/> <p>14 years</p>

¹ ASX Announcement 28 May 2020: DFS delivers compelling Phase 1 Project results.

² Products at steady state operation expressed as a salt.

³ Cash flows based on Benchmark Mineral Intelligence Q1 2020 LiOH price forecast (US\$12,910/t long term).



Options for growth

Karibib Mineral Resources development program to extend Phase 1 life to +20 years in FY2023

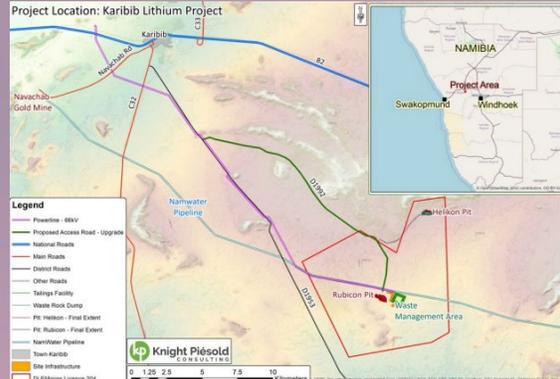
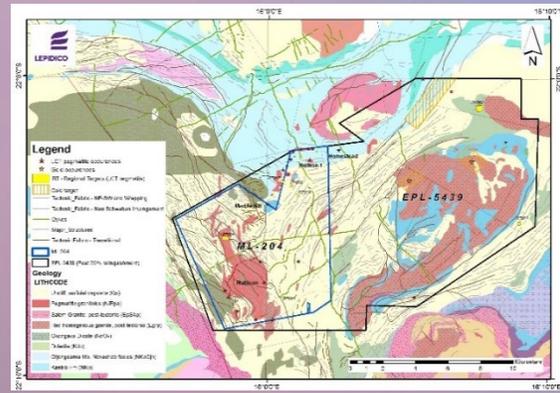
We are already planning a 2-4x scale-up for a Phase 2 project, with concentrate supply from our own assets as well as third-party mines.

Excellent established infrastructure and water permit in place at Karibib for 2x expansion.

Capital efficient Karibib concentrator expansion leverages Phase 1 investment.

Globally, 20 lithium mica & phosphate deposits successfully tested for L-Max[®] amenability.

Royalty revenues from licensing of our proprietary tech to partners. One of these deals has already been completed.



Tom Dukovic
GM Geology

ESG excellence

Water intensity

- 33m³/t LCE, 44% allocation to LiOH
- 20% Namibia/80% UAE for first 5 years
- 85% of concentrator water recycled



Competitive carbon intensity

- GHD reported “low” chemical plant emissions intensity vs other LiOH plants
- 8.8tCO₂-e/t LiOH.H₂O (10.0tCO₂-e/t LCE) for integrated project Scope 1 & 2 emissions – 90% in chemical plant, 10% mine & concentrator
- Renewable power and green hydrogen can lower emissions to just 3.0tCO₂-e/t LCE

Biodiversity

- ESAs identify no material impacts

Land use intensity

- 962Ha integrated project on predominantly industrial land
- Mine closure plan to return land to agricultural use
- No TSF required
- No sodium sulphate produced
- UAE zero solid process waste

Governance

- Experienced board of directors with complementary skills
- All Namibian leadership team
- Diversity – top 5% on ASX¹
- Sustainability & best practice ESG integrated with strategic planning

Social

- Zero harm H&S track record
- Creation of 115 direct jobs and +800 indirect jobs in Namibia
- Creation of 119 direct jobs in UAE
- Water supply to local farmers
- Medical equipment donations



Benedicta Uris

General Manager Sustainability & Country Affairs

¹ ellect, gender equality rating: <https://www.ellect.biz/>

Partnerships and financials

Sustainable long-term relationships being established with all stakeholder groups to underpin growth strategy



Shontel Norgate
CFO



David Hall
Marketing Consultant

Offtakes

- Lithium Hydroxide – **binding offtake agreement signed** December 2021 with Traxys for 35,000t over 7 years, includes sales-marketing, trade finance and logistics
 - Terms sheets in advanced negotiation for back-to-back agreements into the EV supply chain
- Caesium – binding term sheets in advanced negotiation with multiple consumers; Traxys acting as agent
- Rubidium – supply discussions ongoing with multiple groups
- Strong demand in UAE for all bulk products – SOP, silica & gypsum – in environmental applications

Finance

- Formal mandate signed with the U.S. Government's International Development Finance Corporation for Karibib debt
- Commercial lenders engaged for UAE debt
- Lender due diligence advanced; commitments from December 2022
- Strategic partner process managed by Jefferies continues with multiple parties engaged
- Proforma cash at 30 September 2022 \$16.3 million & no debt



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Near-term drivers/catalysts

- Chemical plant control estimate & revised Phase 1 economics on track for November 2022; concentrator FEED complete
- Phase 1 mine life extension December quarter 2022
- Binding lithium offtakes with consumers targeted for December quarter 2022
- Debt commitments from December 2022 with a Phase 1 Final Investment Decision targeted for March quarter 2023
- Strategic partner process well advanced; multiple opportunities
- Phase 2 Mineral Resource expansion program targeting high-grade additions at Helikon 2-5 & regional targets

Accelerating EV adoption rates driving Li-prices

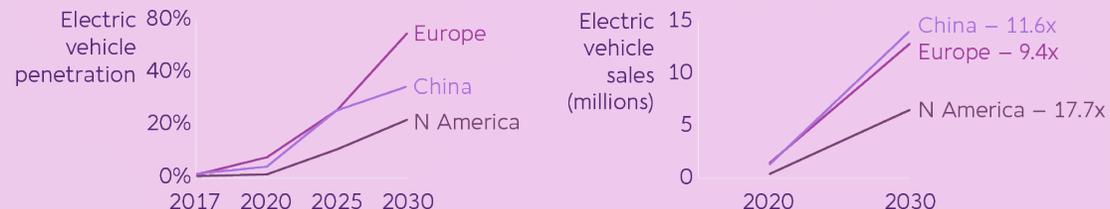
Tight market supply combined with rapidly increasing EV demand is expected to maintain elevated contract lithium prices throughout this decade

Lithium is the critical component



Source: Bloomberg, S&P, Roskill. Note: Market data as of January 25, 2022.

Secular changes in EV adoption are transforming demand for battery materials



Source: Jefferies Equity Research.



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Investment highlights

Delivering a new source of sustainable lithium: why Lepidico

