ACN: 126 129 413
ASX: LIT

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West Perth WA 6005

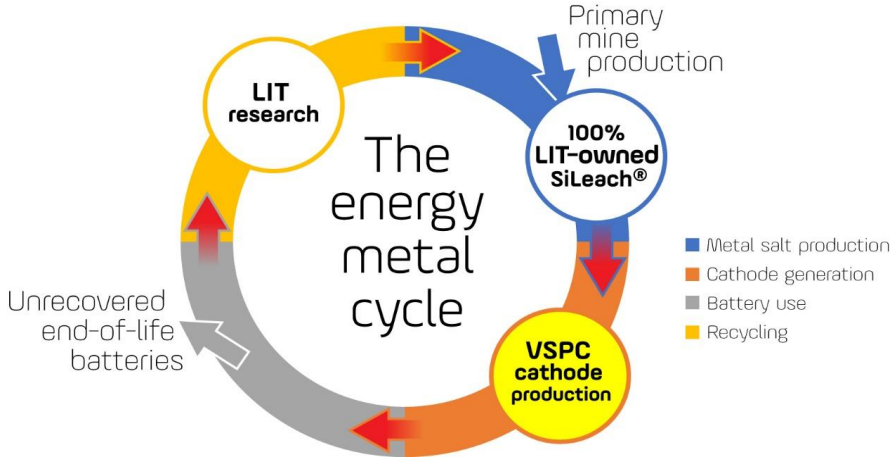
PO Box 588
Belmont WA 6984

4 September 2017

ASX ANNOUNCEMENT

LITHIUM AUSTRALIA - CLOSING THE LOOP OF THE ENERGY METAL CYCLE

On 30 August 2017, Lithium Australia NL (ASX:LIT) announced the intent to procure advanced Li-ion battery cathode production technology, by way of the acquisition of the Very Small Particle Company Limited (VSPC). Successful acquisition of VSPC will provide LIT with access to the technologies required to participate in all sectors of the energy metal cycle.



Further video commentary on this acquisition is provided by the managing director (follow this link) and a presentation covering the most recent LIT activities is provided in Appendix I.

Vertical integration of the technologies accessible to LIT will provide investors with exposure to:

- high-quality exploration assets,
- a range of mineralization styles,
- the best available lithium extraction technologies,
- leading edge Li-Ion cathode manufacturing technology, and
- re-entry into the cycle by recovery of energy metals from spent batteries.

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About Lithium Australia NL

LIT is a dedicated developer of disruptive lithium extraction technologies. The Company has formed strategic alliances with, and invested in, a number of companies with the potential to provide it with access to a diversified lithium mineral inventory. LIT aspires to create a union between current and future resources and the best available technology, and to establish a global lithium processing business.

APPENDIX I

CLOSING THE LOOP OF THE ENERGY METAL CYCLE

(A presentation by Lithium Australia NL)

Closing the loop of the energy metal cycle



Adrian Griffin
Managing Director

Lithium Australia NL
(ASX: LIT)

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Certain statements contained in this presentation, including information as to the future financial or operating performance of Lithium Australia NL ('LIT' or 'the Company') and its projects, are forward-looking statements. Such forward-looking statements are necessarily based on a number of estimates and assumptions that, while considered reasonable by LIT, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies, involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements, and may include, among other things, statements regarding targets, estimates and assumptions in respect of commodity prices, operating costs and results, capital expenditures, ore reserves and mineral resources and anticipated grades and recovery rates and are, or may be, based on assumptions and estimates related to future technical, economic, market, political, social and other conditions.

LIT disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and other, similar expressions identify forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and, accordingly, investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Many known and unknown factors could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements. Such factors include, but are not limited to: competition; mineral prices; ability to meet additional funding requirements; exploration, development and operating risks; uninsurable risks; uncertainties inherent in ore reserve and resource estimates; dependence on third-party smelting facilities; factors associated with foreign operations and related regulatory risks; environmental regulation and liability; currency risks; effects of inflation on results of operations; factors relating to title to properties; native title and Aboriginal heritage issues; dependence on key personnel, and share-price volatility. They also include unanticipated and unusual events, many of which it is beyond the Company's ability to control or predict.

Photographs in this presentation do not depict assets of the Company.

COMPETENT PERSON'S STATEMENT

The information in this report that relates to reporting of Exploration Results is based on and fairly represents information and supporting documentation prepared by Adrian Griffin, a member of the Australasian Institute of Mining and Metallurgy. Mr Griffin is a shareholder in, and managing director of, LIT and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration. He is qualified 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 Griffin consents to the inclusion in this report of the matters based on information in the form and context in which it appears.*

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Lithium Australia – corporate snapshot

(ASX-listed: ticker LIT)

Lithium Australia NL
ACN 126 129 413

BOARD OF DIRECTORS



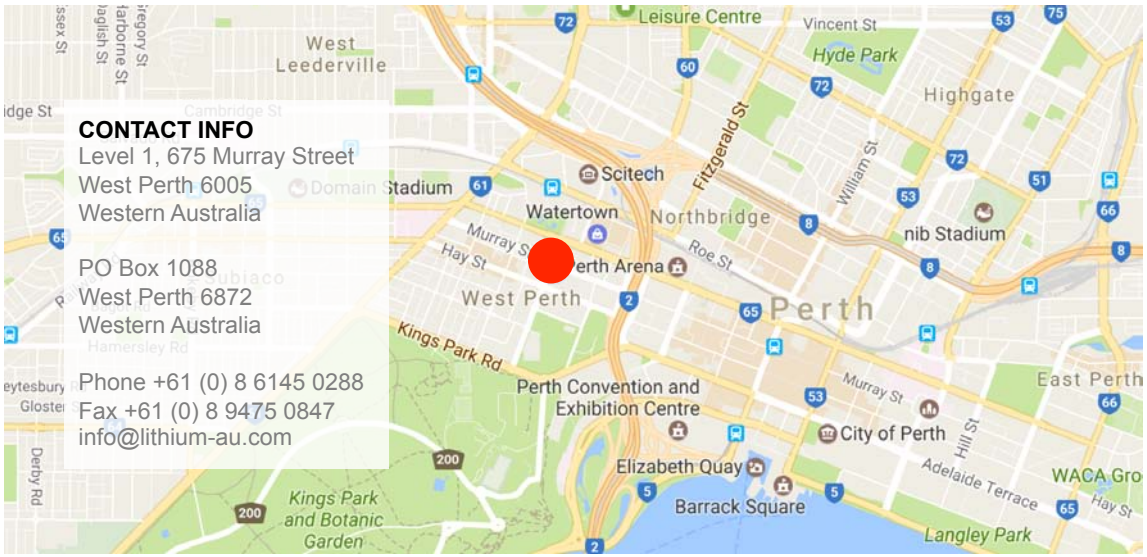
George Bauk
(non-executive chairman)
Expert in specialty metals, particularly rare earths – project management, marketing and financing.



Adrian Griffin
(managing director)
Exploration, production, mine management.



Bryan Dixon
(non-executive director)
Corporate, finance, mine development.



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Price (AU$) as of 28 July 2017	**0.13**
Market capitalisation (AU$)	**42.7 M**
Shares outstanding (LIT)	**296,931,239**
Partly paid shares (LITCE)	**132,850,148**
Cash position (AU$)	**2.57 M**
Debt position (AU$)	**Nil**

Investment portfolio includes AU$6 million equity in other lithium companies and exposure to gold exploration in Western Australia.

Top 10 holders as of 28 July 2017	**22.2%**
JP Morgan Nominees	4.76
Citicorp Nominees	3.66
Adrian Griffin	3.01
Parkway Minerals NL	2.57
Horn Resources	1.97
Alan Jenks	1.32
Apollinax Inc.	1.15
TA Securities Berhad	1.1
Gasmere Pty Ltd	1.06
BNP Paribas	1.06

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Lithium storage – what's it all about?

It's about the biggest change in energy management since the industrial revolution ...



… and that's about batteries.

+ Renewable power on demand 24/7 via lithium-ion batteries (LIBs).
+ Completely portable energy.

The generation of LIBs that makes all this possible has many variants. The cathode in those with the highest energy density – and so well-suited for use in mobile phones, tablets, computers and electric vehicles (EVs) – contains cobalt. 'Safe' LIBs with lithium-iron-phosphate chemistries have lower energy densities but are less prone to 'thermal runaway' and can withstand a greater number of charge/discharge cycles. The latter are the popular choice for hybrid EVs and are also found in power tools and back-up storage for renewable energy. While further battery improvements are ongoing, the ubiquitous LIB is here to stay.

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A year of achievement – 2016/17

In the past 12 months, Lithium Australia has made significant advances towards commercialisation of its SiLeach® hydrometallurgical lithium extraction technology, making it the only company able to recover lithium from all silicates with no roasting phase involved.

Moreover, Lithium Australia has:

+ used SiLeach® to refine materials otherwise incapable of being processed;
+ prepared graphite assets for an IPO, and
+ embarked on exploration globally.



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Sustainability is the future

Lithium Australia NL

Application of advanced technologies for LIB sustainability

Lithium Australia recognises the challenges facing a rapidly expanding battery industry:

+ susceptibility to supply shortages
+ the ethical constraints of conflict metals and concomitant use of child labour
+ low battery recycling rates
+ under-utilised waste streams.

What's required to ensure a feasible future for LIBs is:

+ better utilisation of primary resources
+ higher rates of recycling of the 'energy metals' in LIBS
+ improved battery production techniques.

Right now in Australia, only 10% of batteries are recycled, and abundant lithium from mining operations is discharged to tailings as waste.

Lithium Australia is striving to achieve a 'circular energy economy' in terms of the production and utilisation of LIBs, and aims to integrate the best technologies in order to attain that end.

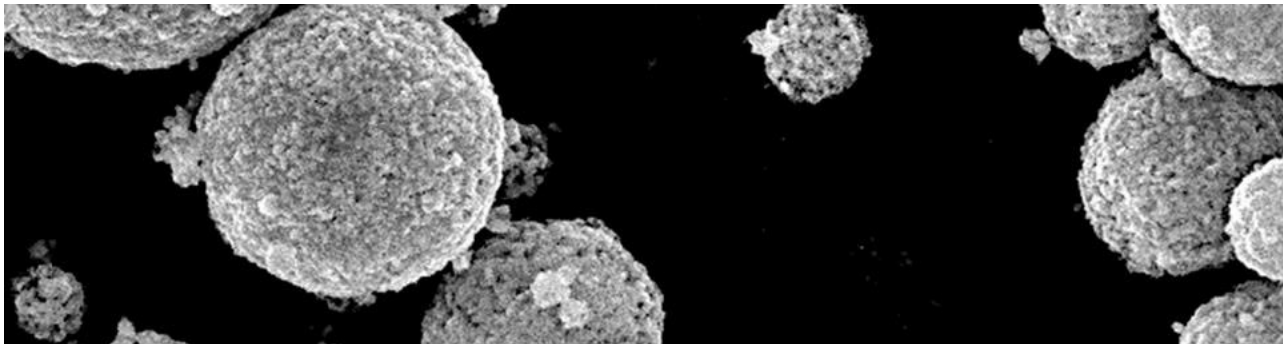
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Developing better battery cathodes

Lithium Australia aims to acquire advanced cathode production technology

The Company intends to:

+ acquire a controlling interest in the Very Small Particle Company Limited (VSPC)
+ recommission VSPC's advanced cathode pilot plant in Brisbane, Australia
+ produce the world's most advanced cathode materials
+ expand VSPC's strategic partnerships.



Advantages of Lithium Australia acquiring VSPC include that VSPC:

+ owns an innovative, patent-protected chemical process
+ delivers very precise chemistry to complex metal oxides (cathode materials)
+ represents a fast track to commercialisation of superior cathode products.

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Lithium Australia's plan

The use of new technology to produce battery chemicals in the lowest cost quartile

This, Lithium Australia's principal goal, will be achieved by:

+ commercialising its 100%-owned SiLeach® lithium extraction technology



Lithium Australia has already produced battery-grade lithium carbonate and demonstrated the potential profitability of the SiLeach® process, with testing of process improvements currently under way.

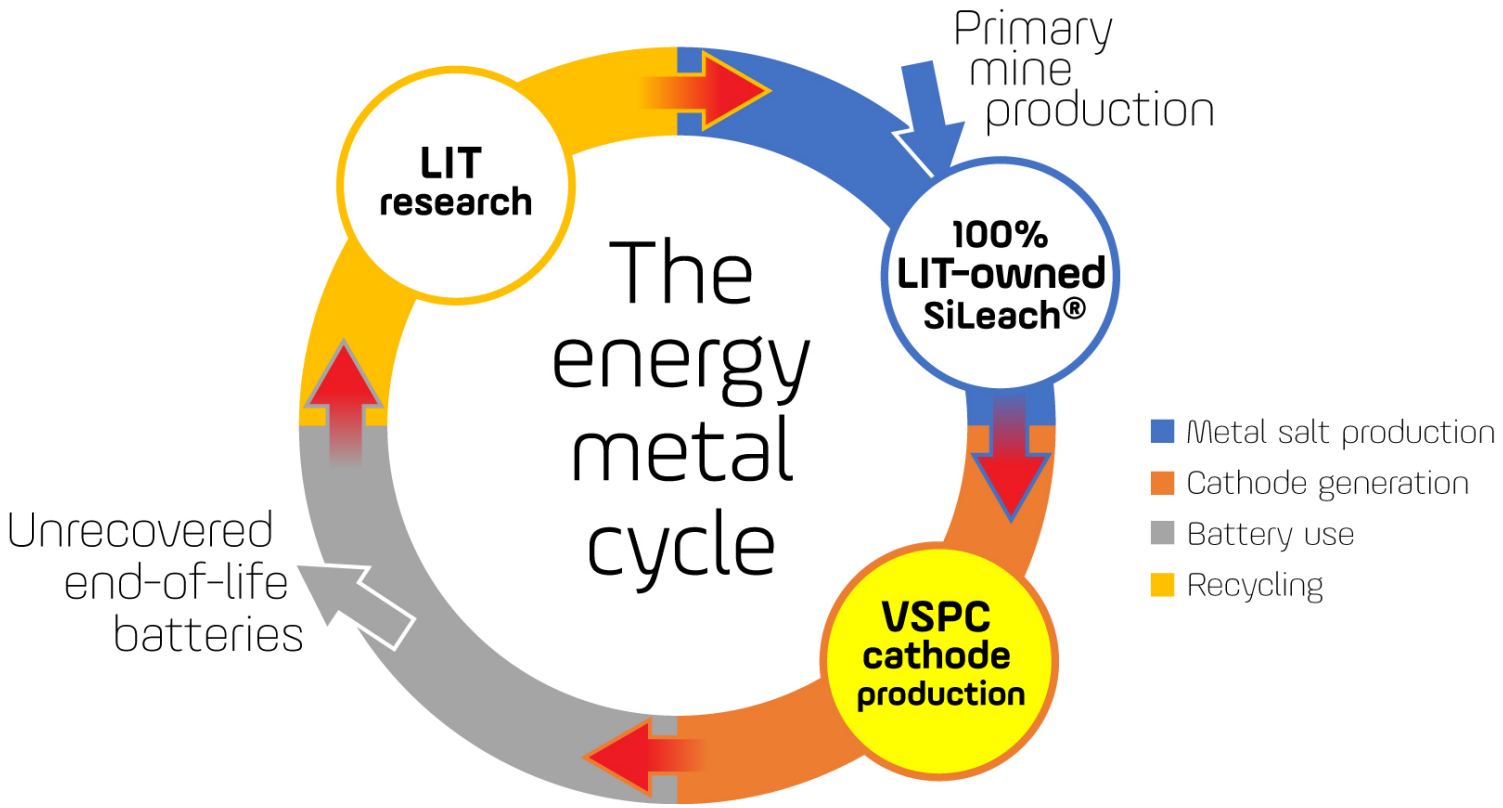
+ commercialising the production of cathode materials
  VSPC has already produced some of the best cathode material in the world.

+ progressing recycling plans to capture the value in LIB waste before it's buried
  Lithium Australia has implemented advanced research programmes to evaluate the cradle-to-grave cycle of LIBs in Australia and North America, and plans to create a closed-circuit processing stream to recover the 'energy metals' from LIBs for input into the production of new cathode material.

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Sustainable production means creating a circular energy economy

Lithium Australia NL



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Recycling is imperative to close the energy metals loop

Lithium Australia is advancing its hydrometallurgical processes, in order to recover spent battery materials and ease the pressure on primary production.

The recycling of energy metals will reduce the battery industry's reliance on primary raw materials. Pressure on cobalt supply is of particular concern, cobalt being largely a by-product of copper and nickel production; ergo, a rapid increase in demand to produce LIBs is likely to push cobalt beyond its tipping point.

Globally, recycling of lithium is close to zero. Lithium Australia, however, has the right technology to recover that metal and reintroduce it into the energy metal cycle.

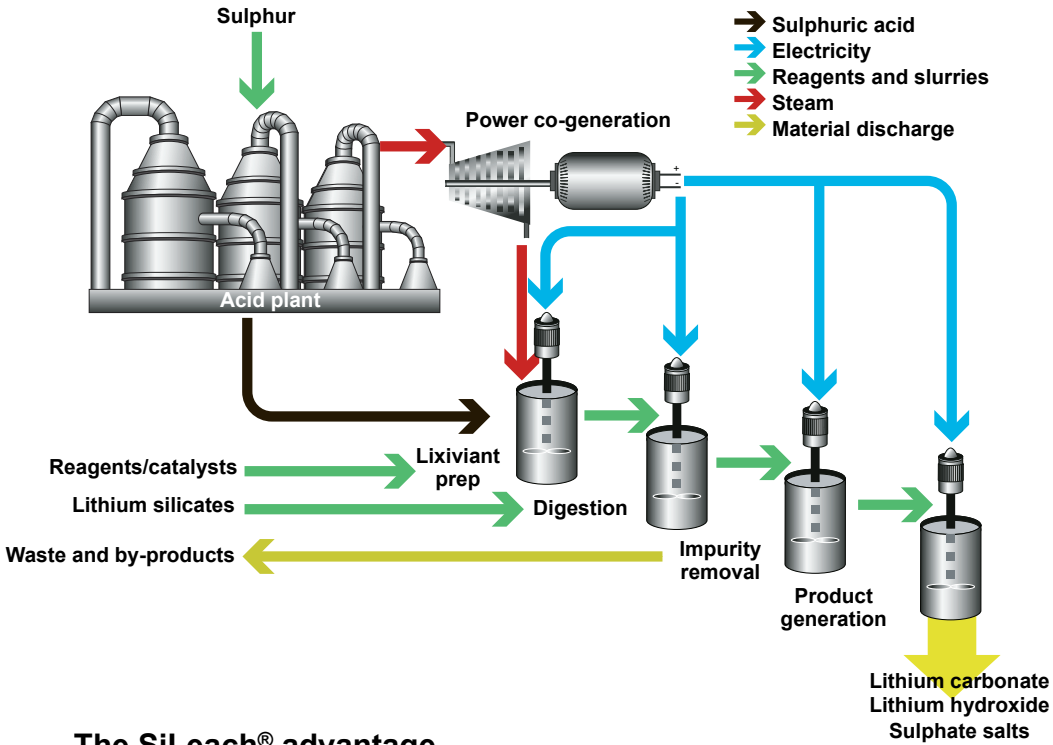
End-of-life LIBs may ultimately prove the cheapest source of many energy metals. While at present most batteries end up in landfill, Australian state governments are moving (albeit slowly) towards restricting such practices. Currently no LIB recycling occurs in Australia, a situation detrimental not only to the environment but also the future viability of LIBs.

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SiLeach®– superior processing technology

Lithium Australia NL

SiLeach® is designed to rapidly digest ANY silicate mineral



During conventional processing, lithium is recovered only from spodumene concentrates, not lithium micas. Also, conventional processing incorporates a roasting phase at temperatures of more than 1000° C, followed by 'sulphation bake', a sulphuric acid process that is undertaken at about 250° C. The residue is subsequently cooled and leached with water to recover ONLY lithium (as a sulphate), which is then further processed to produce lithium carbonate.

As a hydrometallurgical process occurring entirely in solution (no roasting required), SiLeach® reduces energy consumption. Moreover, it's undertaken at atmospheric pressure, so only simple mechanical components are necessary. All metals within the target minerals are soluble in the SiLeach® process, which creates the opportunity to:

+ generate significant by-product credits, and
+ produce very clean lithium solutions.

The latter point is important in terms of the subsequent production of battery-grade lithium carbonate.

The SiLeach® advantage

In summary, SiLeach® is an unparalleled processing environment that efficiently digests and recovers all significant metal values from the minerals processed. Thus, it can be applied to a wide range of lithium feedstock, with low energy consumption, high metal recoveries and extensive by-product credits. In addition, SiLeach® has applications beyond the recovery of lithium from silicates. It has, for example, been tested on refractory gold ores to remove siliceous gangue material from the ore prior to cyanide recovery of gold. Therefore, SiLeach® demonstrates versatility beyond lithium recovery and may become the benchmark for extraction of a wide range of metals from silicates.

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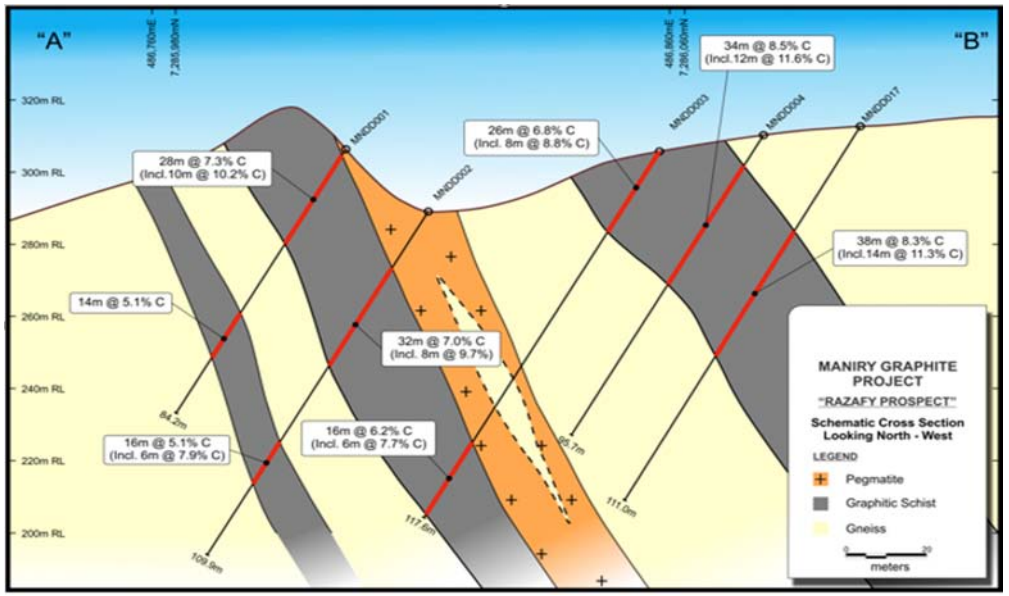
Graphite

Lithium Australia subsidiary BlackEarth Minerals prepares for IPO

Graphite explorer BlackEarth Minerals NL (BEM) holds a significant exploration portfolio in Western Australia, as well as graphite projects in Madagascar.

BEM will list on the ASX later this year, with Lithium Australia as a major shareholder (a priority entitlement will be offered to the latter's shareholders). Lithium Australia has assembled an experienced management team for BEM and Lithium Australia chairman George Bauk will represent the Company on the BEM board of directors.

While Lithium Australia considers graphite synergistic with its other assets, its decision to have BEM operate as a separate entity was made in the interests of maximising the effectiveness of Lithium Australia's management team.







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Investing in Lithium Australia

An investment in Lithium Australia is a contribution to a sustainable lithium – and therefore sustainable LIB – future

- ✓ Application of world-first, 100%-owned SiLeach® technology:
  - + recovery of lithium without the need for roasting
  - + metal extraction from 'waste' minerals.
- ✓ Recycling of energy metals from spent batteries, facilitated by the research of the Resource Conservation and Recycling Corporation Pty Ltd.
- ✓ Development of the world's best cathode materials via nanotechnology (through acquisition of VSPC).
- ✓ Formation and maintenance of strategic partnerships and alliances in major lithium provinces globally.
- ✓ Highly experienced management team.

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