

LITHIUM AUSTRALIA AGM 2019

Lithium Australia NL is listed on the ASX (ASX:LIT)

www.lithium-au.com



ASX: LIT

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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

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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.

Competent Persons' Statement – Lithium Mineral Resources, Sadisdorf

The information in this announcement that relates to in situ lithium Mineral Resources for Sadisdorf is based on and fairly represents information compiled by Mr Thomas Branch, under the direction and supervision of Dr Andrew Scogings, in accordance with the requirements of the Joint Ore Reserves Committee (JORC) Code 2012. Dr Scogings was an employee of CSA Global Pty Ltd at the time of the resource estimation and takes overall responsibility for the Mineral Resources estimate and associated report. Dr Scogings is a member of both the Australian Institute of Geoscientists and Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity undertaken, to qualify as a Competent Person in terms of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). Dr Scogings consents to the inclusion of such information in this report in the form and context in which it appears. Lithium Australia confirms that it is not aware of any new information or data that materially affects the information included in this report and, in the case of the Sadisdorf Mineral Resources estimate, confirms that all material assumptions and technical parameters underpinning the estimates in the 7 December 2017 and 1 June 2018 Company announcements continue to apply and have not materially changed.

Lithium Australia's business divisions

Assembling a global resource and exploration portfolio (Australia, Mexico, Alaska, Europe, Africa).

Extracting lithium from hard-rock sources with no roasting – lower energy use and by-product credits.



Recovering all metals and re-birthing battery components to enhance sustainability.

Producing advanced cathode powders with no lithium hydroxide or carbonate precursors; battery sales in Oceania.

A global footprint

Lithium Australia (ASX:LIT) – a vertically integrated lithium company



Raw Materials



Raw Materials

Our resource and exploration projects have the potential to deliver raw materials to our downstream business units.

Australia - highly prospective portfolio of projects located in some of the world's premier LCT pegmatite regions and include:

- Greenbushes - Stanifer project (100% owned) located next to the world's largest lithium mine run by Talison Lithium and covers 1250 km²
- Bynoe project (100% owned) lies within the Bynoe Pegmatite Field located next to Core Lithium's Finniss project

Germany - located in one of the fastest growing markets for raw materials required for the manufacture of batteries:

- Sadisdorf Li-Sn project (100% owned) is an historic tin mine located in Saxony one of the world's great mining provinces:
 - 25 Mt at 0.45% Li₂O JORC 2012 Inferred Mineral Resource
 - 3.36 Mt 0.44% Sn JORC 2012 Inferred Mineral Resource



Lithium chemicals



SiLeach[®] – lithium from ‘forgotten’ ore

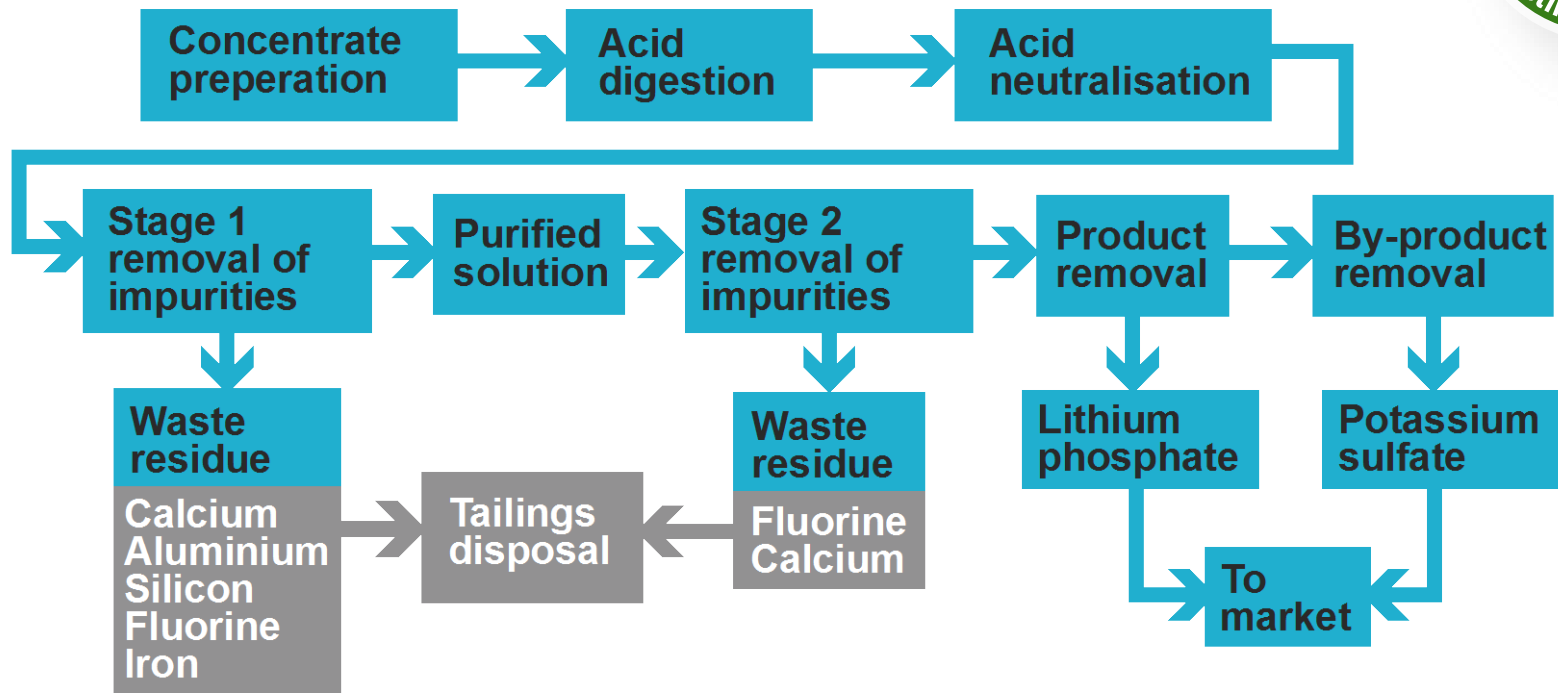


Lithium Australia developed SiLeach[®] to recover lithium and valuable by-products from micas. The process can deliver lithium chemicals such as:

- phosphate;
- hydroxide;
- carbonate, or
- sulfate.

SiLeach[®] has been extensively pilot-tested at ANSTO (Lucas Heights), resulting in breakthrough phosphate precipitation and refining techniques that are subject to **international patent applications**. The process has been successfully demonstrated as the first step in the manufacture of **lithium-ion batteries (LIBs)** from mine waste.





Li_3PO_4 precipitation and refining



- Simple precipitation mechanism to recover lithium from solution
- Efficient recovery can be achieved from low-tenor solutions
- Minimises the requirement and expense of evaporating water to recover lithium
- Applicability to the recovery of lithium from process solutions and brines
- Simple and cost effective refining method developed
- Patent applications lodged for extraction and refining techniques

Spodumene – the “wasted” ore



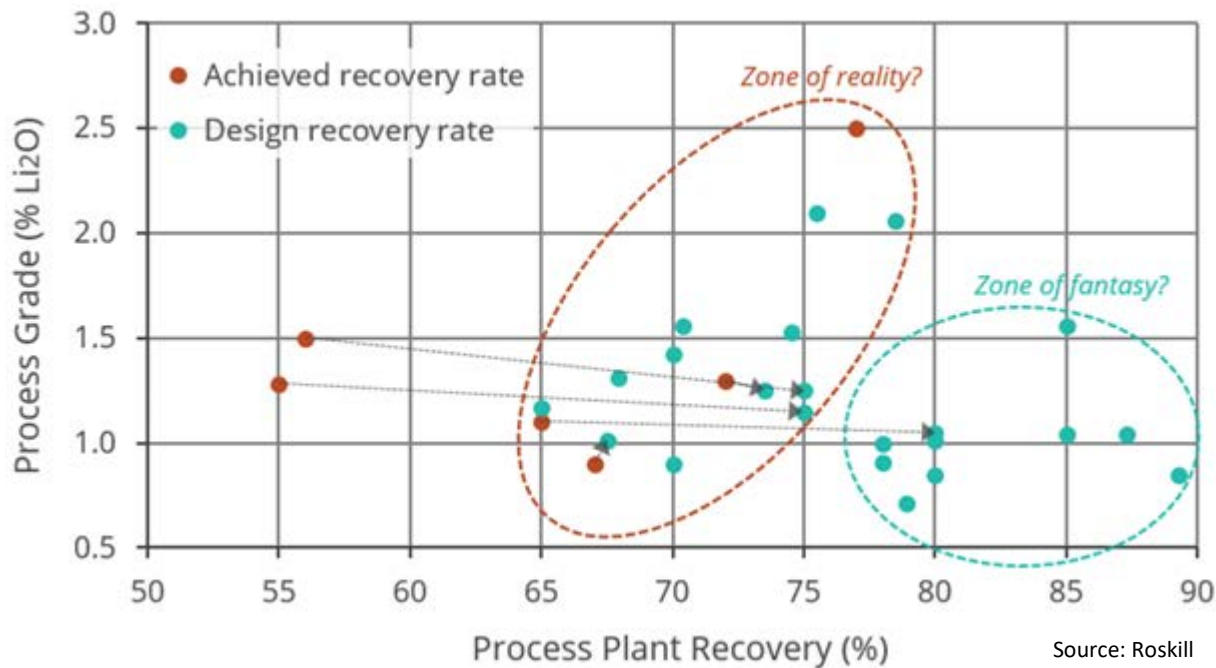
The physical properties of spodumene (two perfect cleavages) results in the generation of fines and slimes during the initial processes (crushing and grinding) required to liberate the material and produce a concentrate. For the concentrate to be suitable for conventional “converters” the particle size of the spodumene must be larger than a critical size, below which the converters cannot function. “Conversion” is a roast/leach/precipitation process used to convert spodumene to lithium chemicals. Furthermore the conventional process also has the disadvantage of being constrained by the production of large volumes of sodium sulphate as a co-product to the production of lithium.

The physical properties of spodumene, which cannot be changed, result in 30-50% of lithium not being recovered to the concentrate fraction – this is the “wasted” ore.

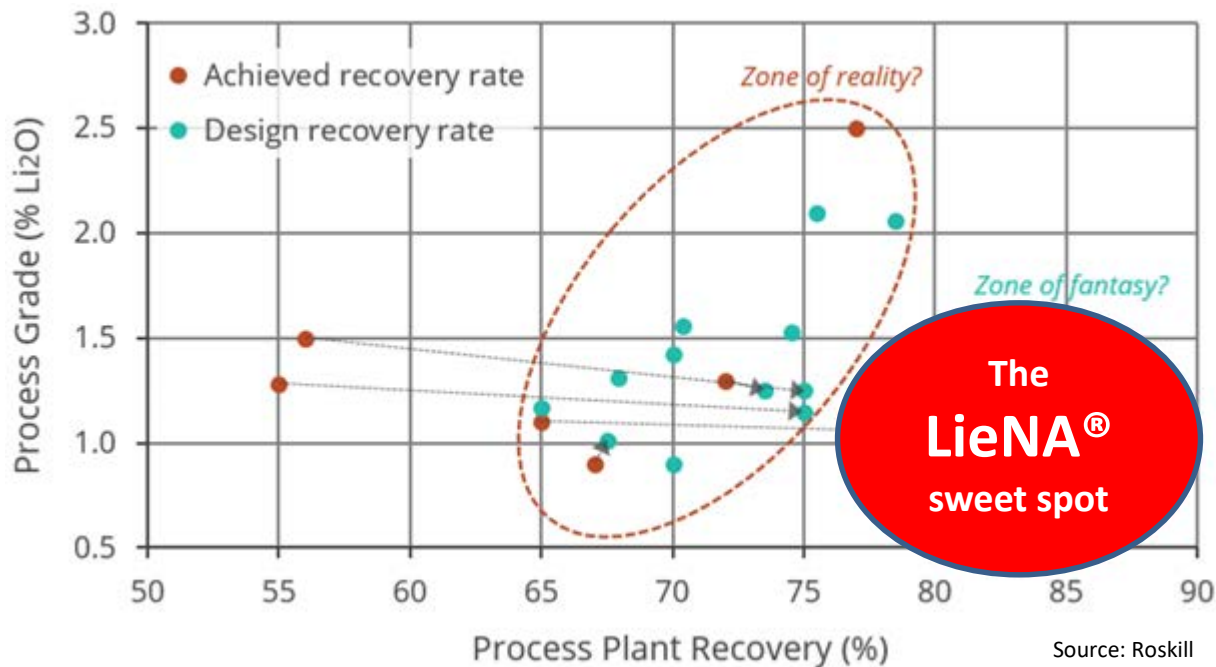
As the physical properties of the spodumene can’t be changed, only improvements in the “conversion” process can increase recoveries by providing a viable means of extracting the lithium from fine and/or contaminated materials.

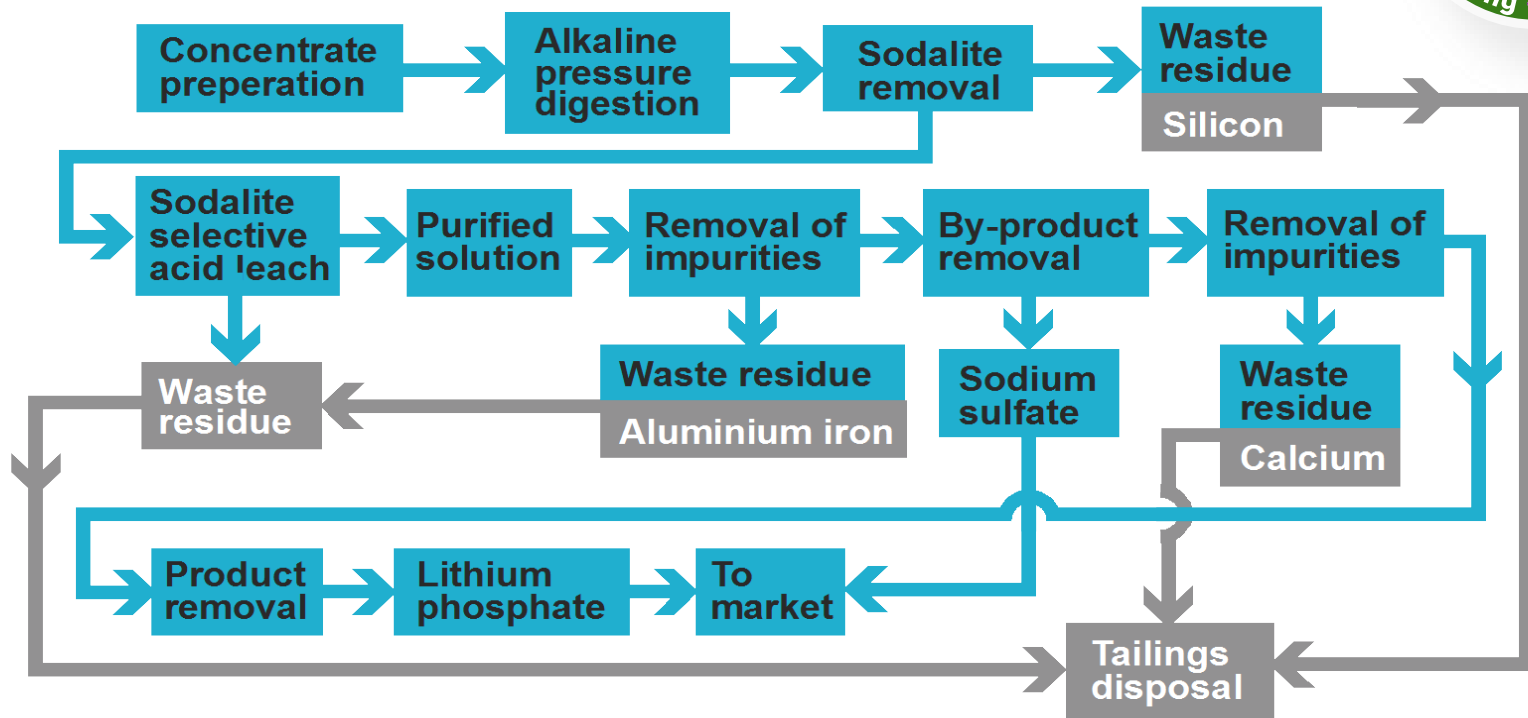
Lithium Australia has developed LieNA® a caustic digest process that thrives on fine and contaminated spodumene. The LieNA® process covered by international patent applications.

Spodumene – the “wasted” ore



Spodumene – the “wasted” ore





LieNA[®] - improved spodumene conversion



LieNA[®] has the potential to improve spodumene conversion by exploiting the fine and contaminated materials that are otherwise discharged to tailings.

LieNA[®] has the following attributes:

- does not require roasting,
- does not produce sodium sulphate effluent,
- has the potential to recycle reagents, and
- provides a choice of lithium products (phosphate, carbonate, hydroxide, sulphate).

The application of LieNA[®] provides the opportunity to:

- lower mining costs per lithium unit recovered,
- increase ore reserves by improving recovery,
- significantly lower mining costs,
- reduce fixed costs per lithium unit delivered,
- reduce carbon footprint, and
- improve sustainability.

LieNA[®] - propelling lithium production from spodumene into the future.

The battery division



VSPC – advanced cathode materials

VSPC Ltd is a wholly owned subsidiary of Lithium Australia focused on developing the world's best cathode powders

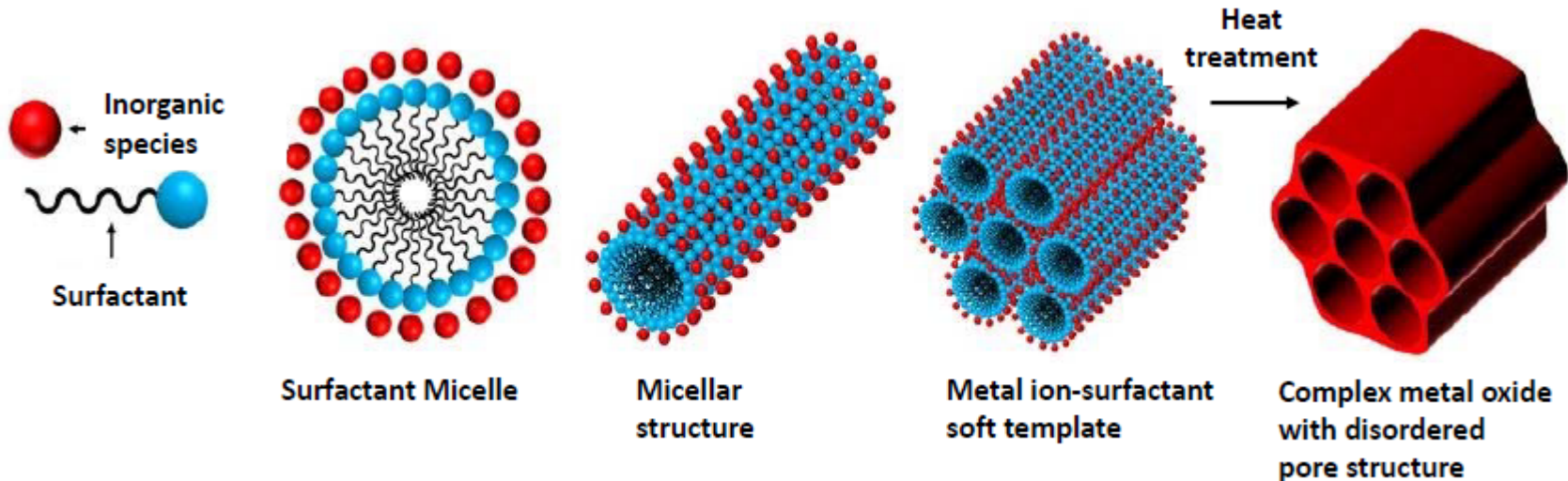


- Pioneering the use of lithium phosphate recovered from waste streams:
 - mine tailings
 - spent batteries
- Performance benchmarks met providing product endorsement with Chinese and Japanese customers
- The use of lithium phosphate reduces the number of process steps to manufacture a lithium ferro phosphate ('LFP') batteries. LFP is a type of lithium ion battery ('LIB')

Using lithium phosphate to produce LFP has yet another commercial advantage – the supply of two critical materials – lithium and phosphorous – in a single reagent.

Sacrificial soft templating

“Sacrificial soft templating” is a key process, covered by VSPC patents, for the production of nano particles. It is simple and efficient nano-technology which involves the use of surfactants to provide precise control of particle composition and morphology.



LFP – an ideal fit with the ESS market



VSPC's principal focus is the production of Lithium ferro phosphate ('LFP') cathode powders, for the production of LFP batteries.

LFP batteries demonstrate the following attributes:

- superior operational life (typically twice the number of duty cycles of other LIB chemistries);
- excellent safety credentials;
- high charge and discharge rates without thermal runaway (low fire risk);
- a wide operating temperature range (ideal for Australian ESS applications);
- low supply chain risk (no nickel or cobalt), and
- lower cost, in that readily available materials are used (no nickel or cobalt).

Further, the absence of conflict metals – cobalt in particular – in LFP batteries makes them a great choice in terms of national energy security, reducing the potential for supply chain disruptions that may arise when materials are sourced from politically unstable areas.

Commercial battery supply

Lithium Australia has agreed to JV with DLG Energy (Shanghai) Co.,Ltd. and others, to deliver energy storage products into the Australian market.

The products will be marketed under the brand name “Soluna Australia” and will include residential and industrial units. Soluna Australia will also provide bespoke energy storage solutions, initially focussing on fringe-of-grid and off-grid applications.

SOLUNA™
SOLAR POWER BANKS



In Western Australia, 52% of the grid services only 3% of the population, and 50% of energy demand is consumed off-grid. This provides a substantial target market, and similar opportunities exist in other Australian states.

Soluna Australia is negotiating the installation of a number of hybrid energy solutions for remote, off-grid applications with a view of installing the first demonstration unit in the first half of 2020.

Lithium Australia's recycling division

- Envirostream Australia



Recycling for a 'greener' Australia



- Lithium Australia has acquired 74% of Envirostream Australia
- Last financial year < 200t feed generated \$1.3M revenue
- Offtake agreement with SungEel Hitech (South Korea)
- Plant relocated and de-bottlenecked
- First product produced
- Capacity 3000 tpa

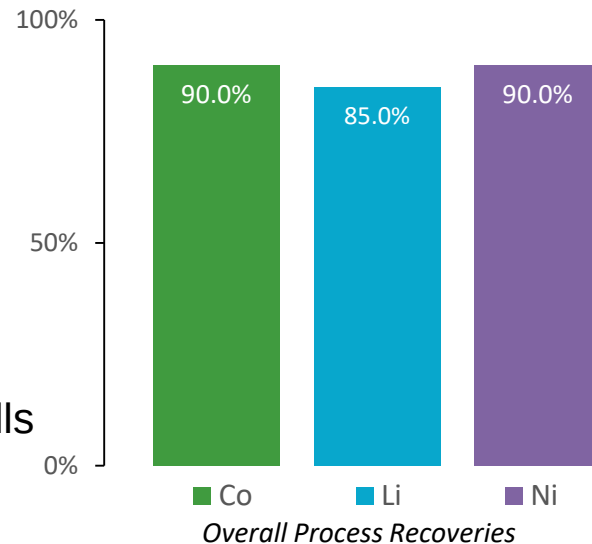


Closing the loop for spent LIBs



- Battery collection model vindicated in Victoria
- Plans to roll out battery collection nationally
- Sales of mixed metal dust resumed
- Successful hydrometallurgical processes tested
- Process flow sheet close to finalisation
- LFP synthesised from recycled lithium
- Resurrected LFP cathodes successfully tested in coin cells

Process modelled metal recoveries



Corporate



Corporate



The battery materials market is a challenging environment.

Despite short-term oversupply of lithium, market fundamentals remain strong, with reliable energy and a cleaner environment being paramount drivers - batteries provide much of the potential solution.

Vertical integration is the key to reducing the number of process steps required to deliver a low-cost product to the consumer and accelerate the adoption of the energy solutions required to reduce humanity's global carbon footprint.

Lithium Australia will continue to develop the technologies required for vertical integration of the battery industry. It has already made major contributions by developing a more direct path from mine to battery pre-cursors, and the processes required to resurrect cathode materials.

Intellectual property ('IP') – a key asset



Lithium Australia has implemented a robust IP management process to capture the value of advanced technologies. Lithium Australia's IP includes 15 PCT applications for lithium processing. Key applications cover:

- the recovery of lithium from silicates (including micas and spodumene) in the form of phosphate or sulphate, and
- recovery of lithium from solution (brines and process liquors) as a sulphate or phosphate

VSPC Ltd (100% subsidiary of Lithium Australia) also has several patent families relating to producing complex metal oxide nano particles and catalysts made from these particles. VSPC's IP includes three granted patent families and 45 PCT applications in multiple jurisdictions. Key patents include:

- method for producing fine-grained particles,
- method for making metal oxides, and
- production of metal oxide particles with nano-sized grains.

Vertical integration – the key to the future



Lithium Australia is now well placed to establish a vertically integrated production chain, one with the potential to take waste materials (from conventional spodumene processing, as well as lithium micas from mine waste) through to LIBs.

Further, spent LIBs can be processed and the cathode materials they contain resurrected using technology currently being researched by Lithium Australia.

The production technologies Lithium Australia has developed to date have the potential to reduce the cost of batteries for consumers and improve resource sustainability overall. This could not only lead to an ethical supply of materials into the battery industry but also provides the potential to ensure energy security at a national level.

Lithium Australia's development plan



Lithium Australia aims to restructure its asset base in such a way as to promote investment in its individual business units,

- create market based valuations through listing of individual business units
- retain value in the holding company by:
 - controlling shareholding in subsidiaries
 - contractual relationships (licence fees, royalties, offtake agreements)
- retain investment flexibility by continuing the listing of Lithium Australia as a holding company

Lithium Australia – the 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 and
processing technology.



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

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Lithium Australia – senior management



Barry Woodhouse
(CFO & company secretary)
Involved in exploration, gold mining, oil production, manufacturing and mining services in several jurisdictions as director, CEO, CFO and company secretary.



Mike Vaisey
(Lithium Batteries)
25 years of Australian & international experience in the mining and chemical industries in senior operational and technical most recently with Lynas Corporation (2001-2017) as Vice President Research and Technology where he led the technical development of the Mt Weld Rare Earths Project.



Tracy Harris
(Financial controller)
CPA with more than 20 years' extensive experience across a number of industries, including mineral exploration, innovative technology, manufacturing and hospitality sectors.



Andrew Skalski
(Lithium Chemicals)
Project development professional with 36 years' experience in the mining/minerals industry, has extensive operational, corporate and project development experience working for national and international companies.



Andrew Mackenzie
(Recycling)
Founding director and shareholder of Envirostream Australia. Andrew is an engineer with over 20 years' experience and was instrumental in the design and development of Envirostream's plant with the vision of increasing the low battery recycling rate in Australia through continuous, onshore innovation.



Questions