Forging a world-class lithium enterprise



Lithium Australia unveils its Sileach™ process: innovation in the production of premium lithium chemicals

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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 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.

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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.*

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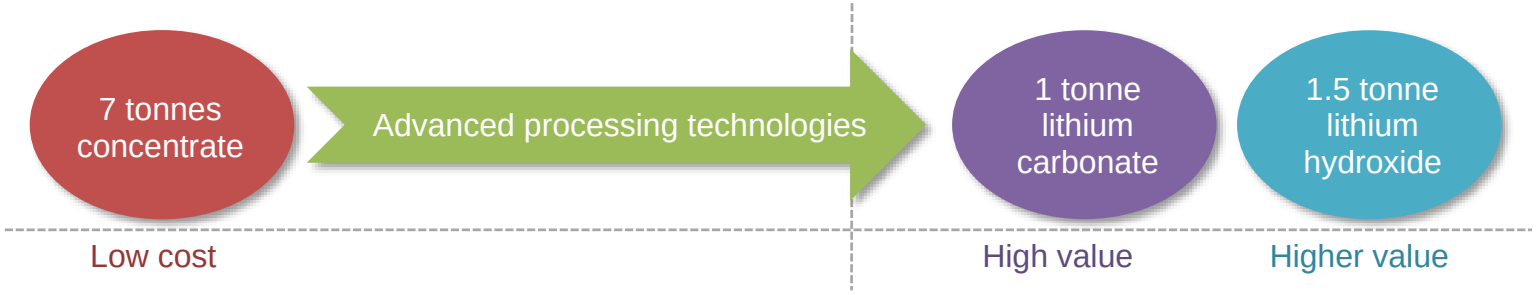
The plan

Lithium Australia (LIT) will commercialise its proprietary Sileach™ technology, establishing mineral treatment hubs that supply premium lithium chemicals reliably and cost-effectively to fuel the lithium power revolution for decades to come.



The assets

Technology

- **Sileach**™ versatile process for all lithium silicates – 100% LIT.
- **LieNA**™ lithium from spodumene in caustic solution – 100%.
- **L-Max®** exclusive processing rights for use in Western Australia (WA) and two projects internationally. The ultimate beneficial owner of L-Max® is currently Platypus Minerals Ltd.

Projects

- Six exploration projects in WA.
- One exploration project in the Northern Territory and one in Queensland.
- Mexican joint venture with Alix Resources.
- Sileach™ development agreement with Pilbara Resources for spodumene processing.
- Significant shareholding in LiGeneration Ltd.

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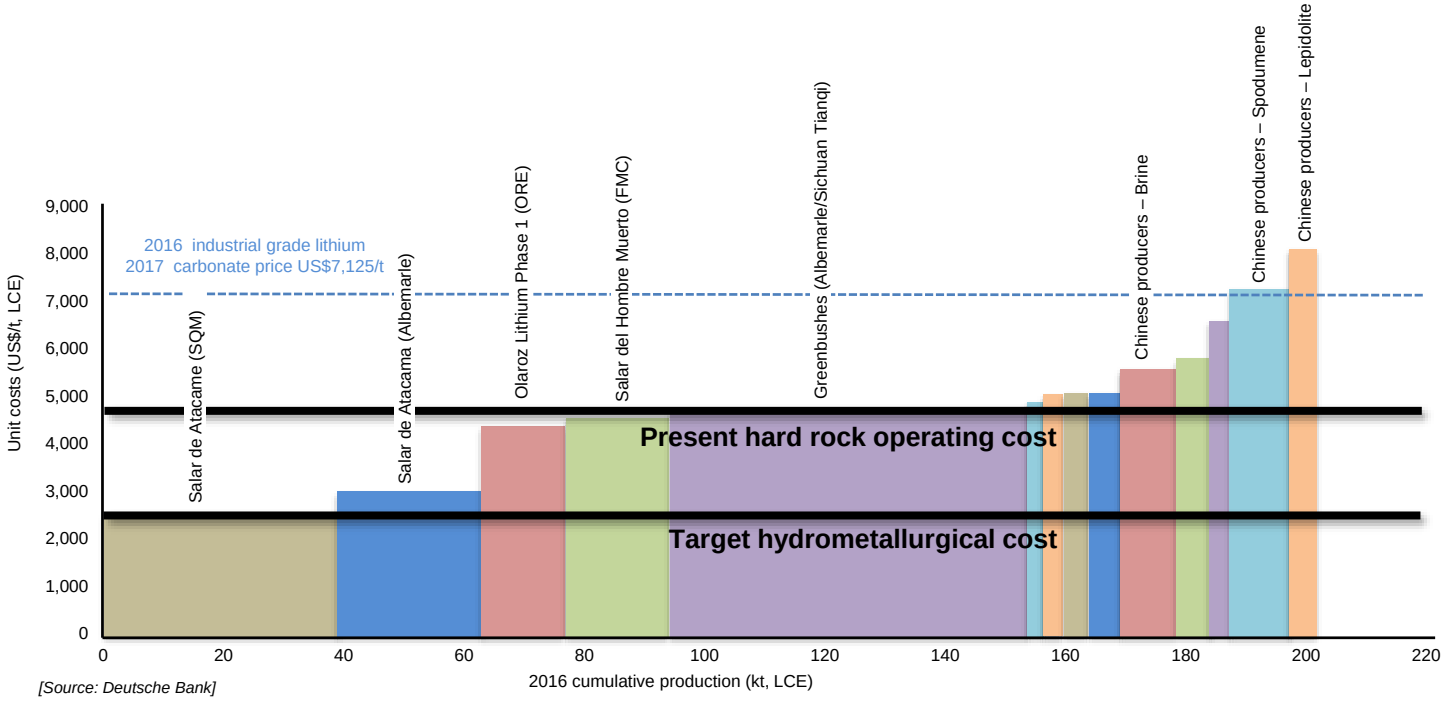
Aspirational statement

LIT plans to capitalise on the significant premium afforded producers of lithium chemicals.



[Source: Deutsche Bank]

- Global production of lithium chemicals is about 200,000 tonnes lithium carbonate equivalent (LCE).
- By establishing global processing hubs, LIT will reap the benefit of the premium added when mineral concentrate is converted to refined lithium chemicals.
- Spot carbonate prices have risen to over US$20,000 in 2016 providing an enormous opportunity to capitalize on the difference between concentrate production costs and lithium chemical prices.

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Transforming the lithium supply chain

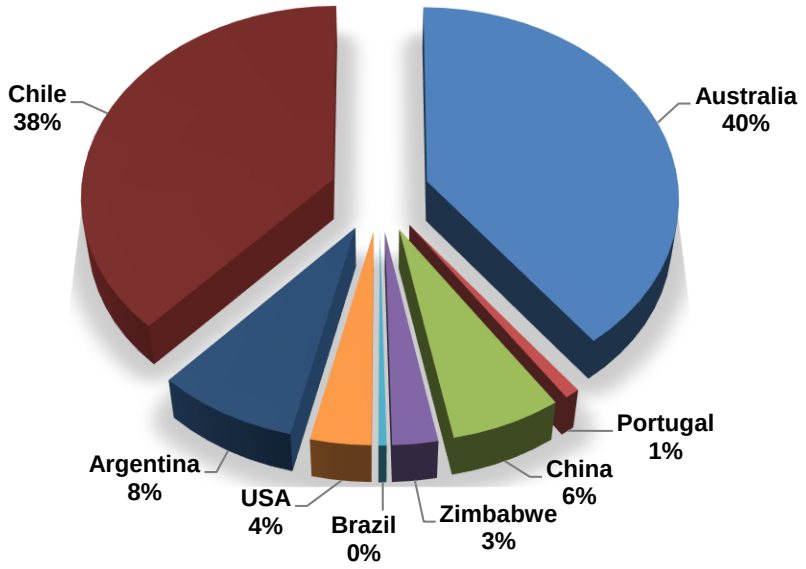
A combination of:

- Australia's rich geological endowment of lithium minerals,
- the global distribution of stranded hard-rock lithium deposits, and
- Sileach™ lithium processing technology

has the potential to:

- unlock an abundance of feed opportunities,
- de-bottleneck supply chain constrictions created by Chinese converters, and
- capitalise on the demand for reliable supply from geo-politically safe sources.

2015 lithium production 33,860 tpa



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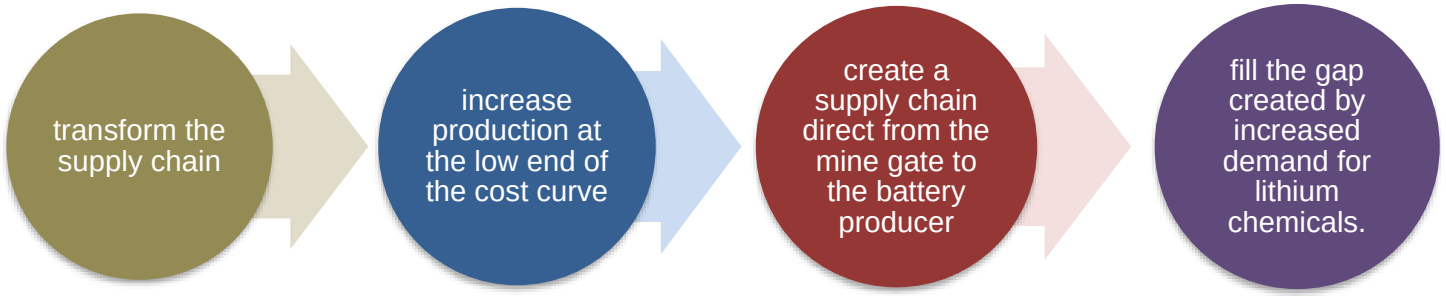
A complete lithium supply solution

Chinese converters represent a major bottleneck in the supply chain that delivers lithium chemicals from hard-rock sources to end-users. At present, only China has the necessary conversion capacity. Consumers – and Japan in particular – are seeking supply from outside China.

LIT plans to:



To achieve its aims, LIT is working towards:

- controlling processing technology – Sileach™;
- commercialising the Sileach™ process;
- implementing key production hubs, and
- ensuring secure supply of lithium chemicals.

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Controlling processing technology – Sileach™

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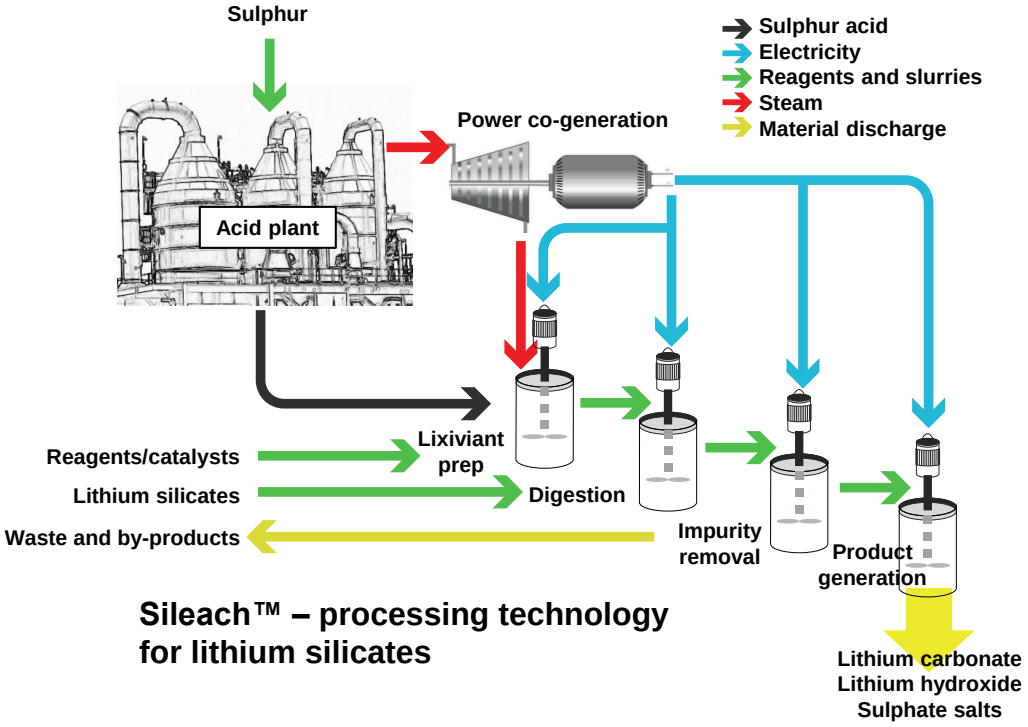
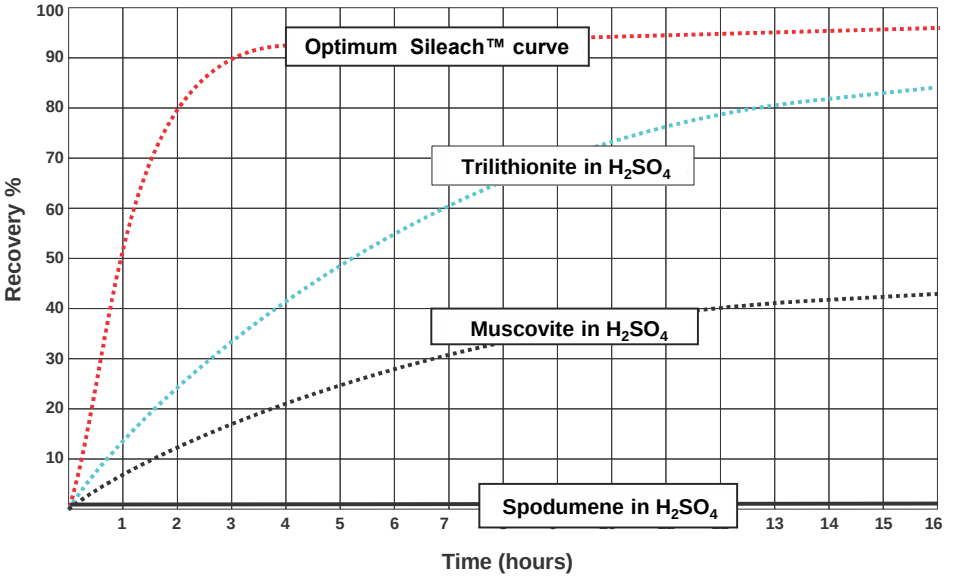
Sileach™ represents a mine-gate-to-consumer solution. A hydrometallurgical process ideally suited to the processing of spodumene, micas and off-specification lithium mineral concentrates, it produces high-purity lithium chemicals (hydroxide or carbonate) at a significant cost advantage compared to existing production. Sileach™ has inherent advantages over processes involving roasting and leaching in that:

- processing occurs at atmospheric pressure;
- energy input is significantly lower;
- the carbon footprint is small;
- recovery from most lithium minerals is high, and
- extensive by-product credits are possible.



Sileach™ – processing technology for lithium silicates



Sileach™ can rapidly leach any silicate minerals.

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Commercialising the Sileach™ process

LIT is working with the ANSTO Minerals, a division of the Australian Nuclear Science & Technology Organisation (ANSTO) to refine the process flow-sheet for Sileach™.

Stage 1 test work well underway to deliver:

- a process flow-sheet for commercialisation;
- operating parameters for the Stage 2 pilot plant, and
- design criteria for the Stage 2 pilot plant.

Stage 2 pilot plant:

- proposed location in Port Hedland;
- anticipated output of 2,000 tpa of saleable lithium carbonate output, and
- anticipated feed of up to 400,000 tpa concentrates.

The path to commercial production



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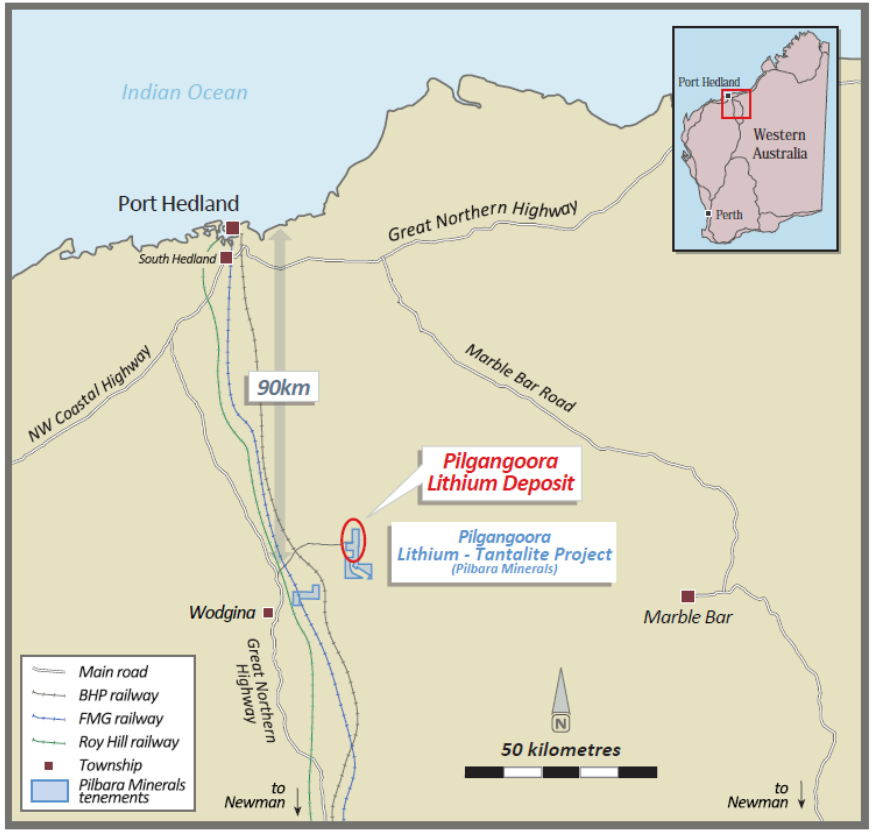
Controlling production hubs

In June 2016, LIT and Pilbara Minerals Limited (ASX:PLS) announced plans to jointly progress Sileach™ for potential future production of low-cost lithium carbonate in WA on a 50/50 basis.

Strong drivers for commercial development of a Sileach™ plant as a toll-treatment hub based at Port Hedland include the following.

- The location is strategically advantageous, due to its proximity to abundant supply sources, which will lower shipping costs to converters in northern Asia.
- The federal government is supporting the commercialisation of Sileach™ with research grants, while the WA state government is assisting with site procurement for the initial processing plant.



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Ensuring secure supply of lithium chemicals

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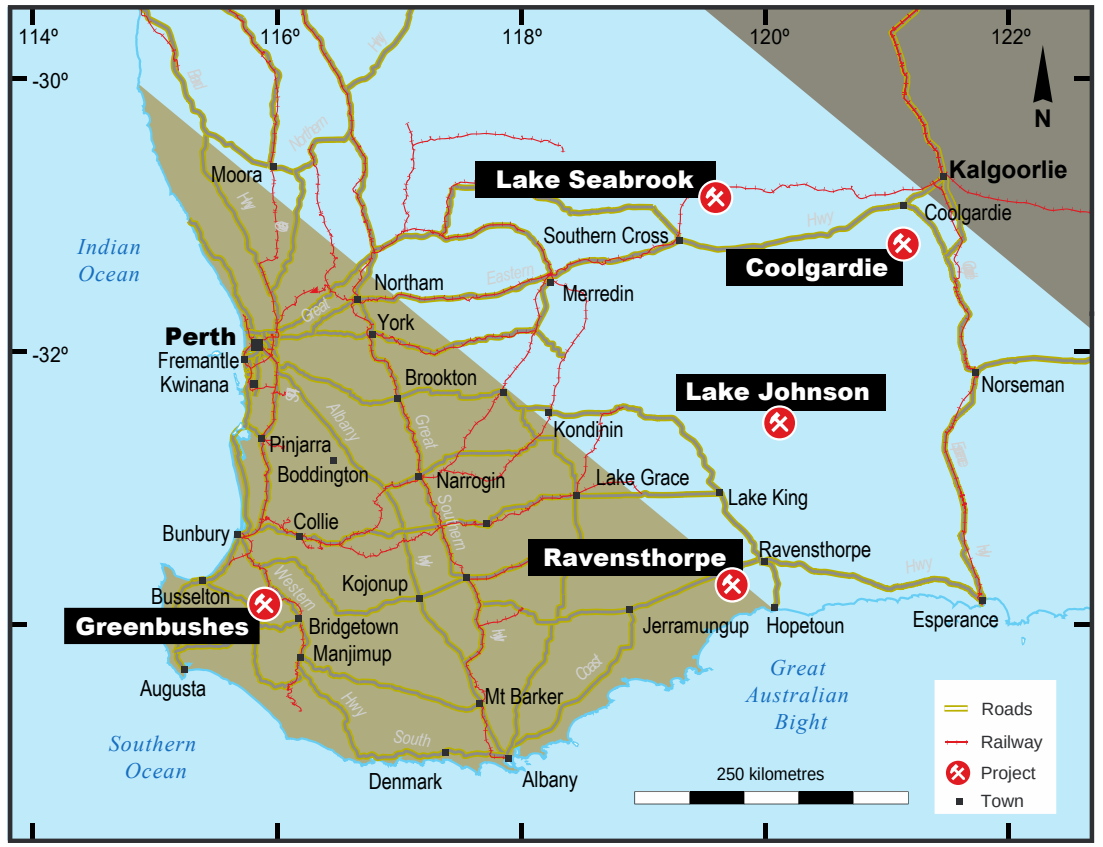
LIT is developing corporate alliances to supply feed to regional processing hubs. The first alliance was signed with Pilbara Minerals (ASX:PLS) in June 2016.

LIT will also ensure feed to regional hubs by developing its own project as a supply backup (or a primary source where appropriate). To implement this strategy, LIT has take strategic project positions in the following locations.

- Pilgangoora
- Ravensthorpe
- Coolgardie/Kalgoorlie
- Lake Seabrook
- Lake Johnston
- the Gascoyne
- Greenbushes
- the Northern Territory
- Cape York, Queensland
- Mexico.



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What's next?

▪ **Finalising construction of the pilot plant with ANSTO.**	**Q3 2016**
▪ **Operating the pilot plant.**	**Q3-Q4 2016**
▪ **Completing the study.**	**Q4 2016**
▪ **Deciding whether to proceed to a continuous, site-based pilot plant.**	**Q1 2017**
▪ **Undertaking ongoing exploration programmes.**	



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Company snapshot

LIT is the only company worldwide with the ability to process all lithium silicates without roasting.

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.

ASX ticker: LIT

- 232 M Ordinary Shares
- 133 M Partly Paid Shares
- 22 M Unlisted Options
- 1 M Performance Rights
- $6 M Cash at bank 30 June 2016

- **Market cap. $61M (July 2016)**

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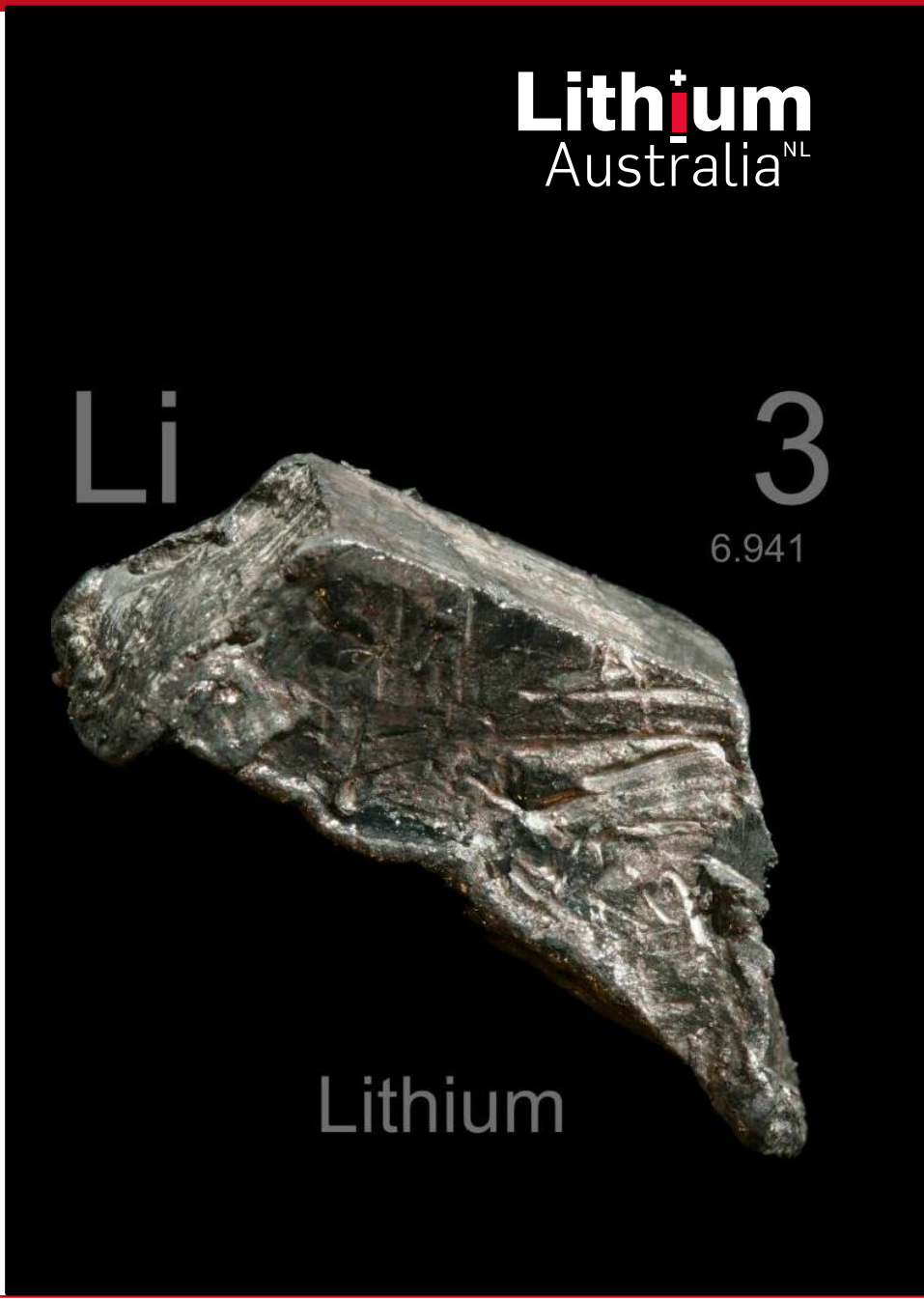

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