Investing in a vertically integrated lithium company

Low emissions
Low cost
Product recycling
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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.
What Lithium Australia is doing

- Closing the loop on the energy metal cycle
- Disruptive technologies
- Sustainability
Lithium Australia – corporate snapshot
The vertically integrated lithium company

FSE-listed: ticker 3MW
ASX-listed: ticker LIT, LITCE

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, processing technology.

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

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Lithium Australia’s technology and assets

Lithium Australia aspires to 'close the loop' on the energy-metal cycle.

The principal business units are:

- **SiLeach®** lithium extraction technology (committed to construction of a pilot plant with a design output of 2500 tpa of lithium carbonate equivalent [LCE]). VSPC compatible.
- **VSPC** (the Very Small Particle Company) technology and pilot plant facilities to produce the most advanced cathode powders. Compatible with feed from SiLeach® and RCARC.
- **RCARC** (Resource Conservation and Recycling Corporation PL) developing processing systems for the recycling of lithium-ion and alkali batteries; output compatible with VSPC.
- **Exploration and resource development** covering prospective ground in major lithium provinces of:
  - Australia
  - Europe
  - Mexico
The future is about sustainability

The energy metal cycle

RCARC recycling

Primary mine production

100% LIT-owned SiLeach®

Unrecovered end-of-life batteries

VSPC cathode production

Metal salt production
Cathode generation
Battery use
Recycling
SiLeach® - superior processing technology - lithium extraction without roasting

SiLeach® is designed to rapidly digest ANY silicate mineral

- Sulphur
- Power co-generation
- Sulphuric acid
- Electricity
- Reagents and slurries
- Steam
- Material discharge

Acid plant

Reagents/catalysts
Lithium silicates
Waste and by-products

Lixiviant prep
Digestion
Impurity removal
Product generation

Lithium carbonate
Lithium hydroxide
Sulphate salts
The SiLeach® battery-grade lithium chemicals at disruptive cost

SiLeach® has the potential to change the cost curve for hard-rock lithium production.

Global lithium carbonate operating costs (after Roskill, 2017) and target hydrometallurgical costs.

Cumulative 2016 production of LCE (t)

Global lithium carbonate operating costs (after Roskill, 2017) and target hydrometallurgical costs.
SiLeach® Large Scale Pilot Plant (LSPP) first production 2020

Location
- established processing site
- infrastructure in place
- utilities and services road, rail, electricity, gas, water, sulphuric acid
- co-disposal of tailings

Lithium mica plant feed
- locally sourced feed from the Western Australian Goldfields
- crushing, grinding and flotation included in plant design

Plant flexibility
- potassium sulphate (fertiliser) circuits to be installed
- silicon, aluminium, and alkaline metal chemicals possible
- LMax® circuits integrated into design
The Very Small Particle Company (VSPC)
- wholly owned subsidiary of LIT.
- $30M and 14 years laboratory research and pilot testing experience,
- developed the best cathode powder manufacturing technology available.

The VSPC advantages:
- innovative, patent protected,
- delivery of very precise chemistry to complex metal oxides (cathode materials), and
- fast track to commercialization of superior cathode production.
- Cost competitive

The VSPC process is compatible with SiLeach® and RCARC
Size matters

Standard cathode powders have a tight particle size range with a median size around 10µm.

Recent advances have seen particle sizes reduced

VSPC – capable of making powders with a particle size only a fraction of that of its competitors

The most advanced powders
VSPC vision - high performance - low cost

Advantages over conventional solid state and hydrothermal synthesis are:
- Control of primary particle size
- Precise control of material composition
- High efficiency; high recovery and no rework
- Employs conventional process equipment
- Lower energy input
- Adaptable to all Li ion battery chemistries

Cathode active materials 2000-2025 - Tons

Source: Avicenne Feb 2017
VSPC Commercialisation Schedule

2018 Program
• Restart of Brisbane, Australia, operations Mar 2018
• Pilot plant commissioning Apr-Jun 2018
• Commence product qualification – LFP Sep 2018
• PFS for commercial plant, site selection Dec 2018
• Commence second Product Development Dec 2018

2019
• Negotiate commercial partnerships Jun to Sep 2018
• DFS for commercial scale plant Sep 2019
• Commitment to commercial scale project Dec 2019
• Ongoing product release for customer evaluation
Lithium Australia is the only company with the technology to transition from mine waste to LIB cathode materials.

SiLeach® can generate lithium carbonate from waste materials.
- 1 t of lithium carbonate = $10,000/t revenue

VSPC can convert SiLeach® product into the most advanced LIB cathode materials
- 1 t of lithium carbonate = 5 t cathode material
- Each tonne of cathode material = $20 - $35,000 revenue
- Value uplift around 15 fold

The production of cathode materials provides the highest uplift in the energy metal cycle.

RCARC will restart the cycle adding sustainability to the industry and conserving critical metals that are in short supply.
Vertical integration of energy metals

Lithium Australia is contributing to a sustainable, low-emission lithium future through:

➢ world-first, 100% owned technology – SiLeach®
➢ developing the world’s best cathode materials - VSPC
➢ full process integration – RCARC closing the loop

Lithium Australia has:

➢ the ability to transition from waste materials to cathode powders
➢ committed to a large scale pilot plant for the SiLeach® process
➢ commenced recommissioning the VSPC cathode plant
➢ commenced process development for LIB recycling
➢ a significant lithium resource inventory to underpin development
➢ Investment opportunities in all facets of the energy metal cycle
Thank you for attending