Disruptive technology to revolutionize lithium production from the world’s most abundant lithium minerals

\[ \text{acid} + \text{lithium silicates} = \text{A new wave of commercial opportunity} \]
Technology has trumped the tyranny of distance and place no longer matters

TELL SOMEONE PRODUCING:
- Nickel in Siberia
- Copper in Mongolia, or
- Spodumene concentrates at Pilgangoora

PLACE DOES MATTER – YOU CAN’T MOVE THE OREBODY!
But you can improve economics with good processing technology
- Low energy
- Low operating cost
- Strong by-product credits
- Technology that is disruptive

WHAT IS DISRUPTIVE TECHNOLOGY?
The history of lithium is a history of disruption
- There is a new wave of disruption
- Turn geological curiosities into reserves
- Lithium Australia leads the pack
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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.

The reporting of mineral species is generic in nature, and the term ‘lepidolite’ – as it is applied to mineral species, and not necessarily locality names – includes mineral species widely considered to be part of the solid solution series of polythionitetrilithionite, of which the Competent Person considers lepidolite to be approximately a median member. It is also acknowledged that material processed from Lepidolite Hill has bulk compositions tending towards trithionite, although the rubidium concentration is outside the range generally expected in such minerals.

Similarly, the term ‘zinnwaldite’ has been applied to minerals approximating the accepted composition of zinnwaldite but with variations tending towards lepidolite. This terminology is considered acceptable by the Competent Person, particularly with respect to the Cinovec deposit, the mineralization of which includes the type locality of zinnwaldite, being Zinnwald, close to the border of Germany and the Czech Republic.
Company snapshot

LITHIUM AUSTRALIA (LIT) – A UNIQUE FOCUS ON LITHIUM

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
ACN 126 129 413
134 M Ordinary Shares
51 M Partly Paid Shares
21 M Unlisted Options
10 M Performance Rights
9 M Performance Option Rights
Market cap. $11 M

info@lithium-au.com
www.lithium-au.com
Disruptive technology to fill supply gap

ABUNDANT FEED POTENTIAL

- Lithium micas, a ‘forgotten resource’ – the most abundant lithium minerals
- Lithium clays – the emerging opportunity
- Other lithium silicates (pyroxenes, amphiboles, tourmalines)

EXCLUSIVE TECHNOLOGY AGREEMENTS

EXCLUSIVE LICENSING

ONGOING PROCESS EVALUATION

EXPANDING SUPPLY GAP
Company strategy

To produce battery-grade lithium chemicals from unconventional mineral commodities

Produce the chemicals required by the end user not intermediates convenient for the supplier

Dominate global lithium inventories

Develop well serviced regional processing hubs
LIT progress for 2015

CINOVEC SCOPING STUDY
NON BINDING HoA WITH EUROPEAN METALS HOLDINGS LIMITED
CONTINUOUS PLANT RUN FOR LEPIDOLITE HILL
EARLY EXERCISE OF TECHNOLOGY LICENCE OPTION
CONTINUOUS PRODUCTION OF BATTERY GRADE LITHIUM CARBONATE

PROGRESS IN NOVEMBER 2015
► Geochemical surveys completed at Lepidolite Hill
► Geochemical surveys commenced at Pilgangoora (Western Australia)
► Agreement with Alix Resources Corp (AIX-TSX:V)
► Short-list of consultants to spearhead lithium clay processing
► Successful capital raising

FUTURE EXPECTATIONS
► Cinovec JVA
► Cinovec continuous mini plant run
► ALiX bench scale leach tests
► ALiX JVA
► Evaluation of additional European deposits
► Commitment to mica pilot testing
► Energy efficient outcome for the processing of lithium clays
► Leverage into lithium clay inventories
A Case Study – the Lithium Micas

CONTINUOUS PRODUCTION – BATTERY GRADE CHEMICALS
- Zero energy footprint
- Waste materials with no mining cost
- High feed grades
- Fast reaction time – low capital cost

UTILIZE A FORGOTTEN RESOURCE
- Capitalize on availability of most abundant lithium minerals
- Utilize advantages of strategic partnerships
- Change operating cost profile
- Prosper from by-product credits

RE-EVALUATE GLOBAL LITHIUM OCCURRENCES
- One man’s trash is another man’s treasure
- Turn geological curiosities into reserves
Proof of concept

THE CONCEPT BECOMES REALITY

Cinovec lithium concentrate grade

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<th>K&lt;sub&gt;2&lt;/sub&gt;O</th>
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Cinovec lithium carbonate purity >99.6%

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LIT has produced battery-grade lithium carbonate from Lepidolite Hill in Western Australia and Cinovec in the Czech Republic, has recovered lithium from two other European deposits and is examining further deposits at Ravensthorpe, Lake Seabrook and Pilgangoora in Western Australia.

LIT has received its first product endorsements from Japanese traders.
Continuous plant test – May 2015

All process energy requirements derived via harvesting waste heat from a sulphur-burning acid plant.

Steam

Electricity

Heat

K$_2$SO$_4$ crystallization

Sulphuric acid plant

Sulphur

Sulphuric acid

Mica feed

Sulphuric acid leach

Tailings

pH modifier

Impurity removal

Tailings

Carbonate feed

Lithium carbonate precipitation

COMMERCIAL PRODUCTS
Lithium extraction from unconventional sources

Lithium market

**Consumption by application**

- Aluminium: 32%
- Other: 17%
- Metallurgical powders: 11%
- Chemicals and pharmaceuticals: 10%
- Lubricants: 6%
- Batteries: 2%
- Glass and ceramics: 2%

**Production by country**

- Argentina: 1.6%
- Australia: 3.1%
- Brazil: 8.5%
- Chile: 36.8%
- China: 38.2%
- Portugal: 11.3%
- Zimbabwe: 0.4%

**Demand for lithium batteries**

- 3C
- Power
- Heavy duty
- Transportation

**HARD-ROCK PRODUCERS**

- Talison, Greenbushes – Western Australia (WA)
- Sociedade Mineira de Pegmatites – Portugal
- Bikita Minerals (Pvt) Ltd – Zimbabwe
- Various – China

**HARD-ROCK DEVELOPERS**

- Pilbara Minerals, Pilgangoora – WA
- NeoMetals, Mt Marion – WA
- General Mining, Mt Cattlin – WA
- Altura, Wodgina – WA
- Nemaska Lithium, Whabouchi – Canada

Lithium extraction from unconventional sources

The lithium mica landscape

LITHIUM CARBONATE OF HIGH PURITY PRODUCED
- Capital cost $US164 M – includes sulphuric acid plant, power co-generation
- Zero energy footprint
- Capacity – 20,000 tpa of battery-grade lithium carbonate
- Operating cost <US$2,000/t after potassium sulphate credits

Global perspective

OPPORTUNITIES IDENTIFIED IN:
- Europe (large-scale greisen deposits)
- Africa (including Namibia, and South Africa)
- North America (Canada, Mexico and the US)
- Australia (including WA exclusive processing licence)

Continuous technology improvement

EXPLORATION DEVELOPMENTS
- Real-time, field-portable lithium assays
- Advanced geochemical modelling

PROCESS TECHNOLOGY
- Proprietary technology licences procured
- New technology being developed for other mineral species
Cost profile

Estimated global lithium cost curve [sources: Roskill (with modifications) and Orecobre 2014 presentation].
Lithium extraction from unconventional sources

Global lithium resources

CINOVEC EMERGES AS SIGNIFICANT LITHIUM RESOURCE

Lithium Inferred Resource: 5.5 Mt LCE, 514.8 Mt @ 0.43% Li₂O (0.1% Li cut-off)

Additional Exploration Target: 3.4 to 5.3 Mt LCE, 350 to 450 Mt @ 0.39-0.47% Li₂O*

CAUTIONARY STATEMENT The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

* As announced to the ASX on 26 June 2015.
MEMORANDUM OF UNDERSTANDING

- Alix and LIT to co-operate to develop superior processing technology for lithium clays.

- Targets include lithium clay deposits adjacent to Bacanora’s Sonora Project (Mexico) – The Electra Lithium Project, which includes Tecomote and Tule.

- Tecomote and Tule are interpreted to host extensions of the sedimentary/volcanic succession that contains the lithium bearing clays.
Company advantages

valor-adding factors

Service agreement with Strategic Metallurgy
Technology licences with Lepidico
Technical alliance with SciAps

First-mover advantage
LIT is the leader in the production of battery-grade lithium carbonate from micas, and has led to a rapid accumulation of assets and enabled expansion on three continents with diversification from lithium micas to a range of lithium silicates.

Alliances with Pilbara Minerals, Focus Minerals, and Tungsten Mining

Opportunities previously overlooked
- Tailings
- Current mine-waste discharge streams
- Primary lithium mica deposits

Escalating demand
- Revolutionary innovations in transport
- New renewable-energy storage solutions
- Emergence of smart-grid systems

Cinovec – non-binding HoA with EMH
- Giant lithium mica deposit in the Czech Republic
- Scoping study complete
- High-purity lithium carbonate produced
- Advancing to feasibility

ALiX – non-binding HoA
- Lithium clay evaluation
- Exploration potential
- Springboard into lithium-hungry North America

FURTHER INFORMATION
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