ASX ANNOUNCEMENT

12 October 2015

COMPANY DETAILS

LITHIUM AUSTRALIA NL
ABN: 29 126 129 413
ASX CODE: LIT & LITCB

PRINCIPAL AND REGISTERED OFFICE
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POSTAL ADDRESS
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CORPORATE INFORMATION
(12 October 2015)
134M Ordinary Shares
37M Listed Partly Paid Shares
15M Unlisted Partly Paid Shares
5M Unlisted Options
8M Performance Rights
16M Performance Option Rights

BOARD OF DIRECTORS
George Bauk
(Non-Executive Chairman)
Adrian Griffin
(Managing Director)
Bryan Dixon
(Non-Executive Director)

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LIT'S SEPTEMBER QUARTER ADVANCES HUNT FOR LARGE LITHIUM MICA TONNAGE

Report for the quarter ending
30 SEPTEMBER 2015

HIGHLIGHTS

- LIT exercised its exclusive processing technology option with Strategic Metallurgy.
- Successful continuous 10 day mini plant test of concentrates extracted from Lepidolite Hill (Western Australia) produces 99.6% lithium carbonate.
- Production of higher-value aluminium chemicals and silicon chemicals points to improved economics.
- High take-up (84%) of partly paid share program to raise $320k and 25% premium on public auction of balance to raise a further $80k.
- Shareholders approve change of name to Lithium Australia NL.
- Appointment of new Chairman, Mr George Bauk.
- Appointment of new CFO, Mr Barry Woodhouse.

SUMMARY

Lithium Australia ("LIT") is the only company actively pursuing the production of battery-grade lithium carbonate from micas with a cost competitive processing technique. This gives LIT significant 'first mover' advantage, as does the exclusive nature of its extraction technology licenses within Australia and internationally.

Western Australia's lithium mica deposits remain LIT's exclusive domain, while the first of its global licenses has been allocated to the giant Cinovec deposit in the Czech Republic.

Meanwhile, LIT is assessing other projects worldwide and reviewing opportunities in Africa, Europe, the Americas and Australia.

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EUROPE

Under the terms of the MoU announced in December 2014, the Company commenced intensive metallurgical test work on material from the European Metals Holdings Limited's (ASX: EMH) 100% owned Cinovec project (ASX Release 15 Dec 2014). The Cinovec Project is located in the Czech Republic, 100km northwest of the capital, Prague, and close to the border with Germany (Figure 1).



Figure 1. Location of the Cinovec deposit, Czech Republic

The tin and tungsten mineralisation at Cinovec occurs within a pervasive, lithium-bearing greisen (altered granite). The lithium is contained within mica, principally zinnwaldite, which is very amenable to concentration by flotation, as evidenced by high mica yield achieved during the Company's laboratory-scale testing of the tailings from tin/tungsten gravity concentrates (ASX Release 4 Feb 2015). The following results were achieved:

- **Cinovec gravity tails Li_2O 0.71%, K_2O 2.94%**
- **Concentrate grade Li_2O 2.05%' K_2O 7.56%**
- **Flotation tail Li_2O 0.02%, K_2O 0.58%**

Leaching the float concentrates achieved extractions of 92-97% and subsequent processing produced lithium carbonate of exceptional quality (ASX Release 17 April 2015).

Cinovec Lithium Carbonate purity >99.6%												
Li_2O	K_2O	CaO	Al_2O_3	SiO_2	FeO	MgO	S	P	As	Co	Rb	Cs
%	Ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
40.3	176	57	ND	87	ND	67	1581	162	ND	ND	24	ND
40.3	128	75	ND	54	23	ND	1042	94	ND	ND	8	ND

Technology used for the extraction process was provided under license to LIT by Perth based Strategic Metallurgy Pty Ltd. The process has a very low energy footprint and is capable of generating significant by-product credits and as a tailings treatment, is estimated to have a cost below US$2,000 per tonne of lithium carbonate produced (ASX Release 20 April 2015).

Work undertaken by the Company on the Cinovec lithium tails assisted in reassessing the resource as a primary source of lithium (ASX Release 9 Feb 2015) resulting in a 285% increase in resource tonnage as follows:

- ***Inferred Li Resource of 5.5Mt LCE*, 514.8Mt @ 0.43% Li2O (0.1% Li cut-off); and***
- ***Additional Exploration Target of 3.4-5.3Mt LCE, 350-450Mt @ 0.39-0.47% Li2O***

*LCE = lithium carbonate equivalent, a common measure for reporting lithium production and demand.
LCE = Li2O% x 2.473.

***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.

Refer to EMH ASX announcement 6 October 2015

This result places Cinovec amongst the largest hard-rock lithium deposits in the world.

HEADS OF AGREEMENT
As a consequence of the outstanding Cinovec laboratory-scale processing success, and re-evaluation of resources, the Company and European Metals have executed a non-binding Heads of Agreement (ASX Release 20 April 2015) to record the intentions of the parties prior to drafting a formal Joint Venture Agreement (JVA). The terms recorded in the HOA include:

- The Company to Manage the JV.
- The Company to utilise the license rights granted by Strategic Metallurgy, to the Company, for the JV.
- The Company to procure the technical support of Strategic Metallurgy.
- The JV to cover opportunities in countries sharing common borders with the Czech Republic.
- European Metals Holdings to supply the lithium bearing tin tailings to the JV.
- The JV to compensate European on the basis of:
    - Tonnes of concentrate fed to the leach circuit
    - Concentrate to be priced to provide equivalent IRR to both the tin operation and the lithium operation.

COLLECTION OF SAMPLES
Bulk samples from Cinovec to produce lithium carbonate, for market evaluation, have been composited and will be transported to Perth for processing under continuous conditions in the mini-plant operated by Lepidico Ltd.

OTHER PROSPECTS
The Company has successfully recovered lithium from mica concentrates from two other deposits located in Europe.

WESTERN AUSTRALIA

COOLGARDIE RARE METALS VENTURE (LIT 80%, Focus Minerals Limited (ASX: FML) 20%)

The Coolgardie Rare Metals Venture (CRMV) is an initiative with FML. It includes the historic lithium production centre of Lepidolite Hill. Under the terms of its agreement with FML, LIT has the rights to all metals derived from pegmatites on the property and will free-carry a 20% FML interest to the point at which a decision is made to commit to feasibility.

Bulk samples from Lepidolite Hill were subjected to flotation, producing a high-grade lepidolite concentrate that was subsequently leached in the September 2015 quarter. Further processing of the leach liquor removed unwanted impurities and precipitated battery-grade lithium carbonate which will be subject to further optimisation as reported.

The test plant as operated by Lepidico was designed to recover lithium carbonate from lithium micas, including lepidolite and zinnwaldite. The plant utilises the L-Max hydrometallurgical flow sheet which is based on:

- direct leaching of the mica (no energy intensive roasting required);
- impurity removal;
- recovery of lithium as a carbonate (suitable for the battery industry); and
- recovery of potassium as a sulphate (fertiliser).

This is the second successful attempt to recover lithium from lepidolite on a continuous basis. Both campaigns have used lepidolite mineralisation sourced from Lepidolite Hill. The test plant was constructed of bench-scale laboratory equipment with a nominal feed rate of 2kg/hr concentrate to the leach circuit.

Plant operation parameters

The plant was operated in several stages, pre-fill, continuous operation and de-commissioning over an approximate 15 day period. A total of 229 kg of mica ore was processed in 111 hours of continuous leaching. The downstream processing plant was operated continuously for 168 hours in which a total of 8.7 kg of lithium carbonate, at an average grade of 99.6%, and a recovery rate from leach liquor of 94%.

Significant results

The main conclusions derived from the campaign are:

- Continuous mini plant operation successfully demonstrated the process chemistry;
- No fatal flaws were evident in the chemistry or mechanical operation of the plant;
- Continuous leach results emulated batch results, indicating the relative ease of predicting continuous leach performance from batch test data;
- High recoveries of potassium, rubidium, cesium, aluminium and flourine to intermediate products were achieved heralding development of additional circuits to recover these commodities;
- High recovery of lithium from the leach liquor to the final product;
- All slurries filtered and dewatered exceptionally well; and
- A well-defined set of design criteria for a pilot plant can be extracted from the mini plant run.

Lithium carbonate quality

High-grade lithium carbonate was produced throughout the majority of the campaign with the total product averaging 99.6% Li_2CO_3. The following impurities were detected and are expressed as parts per million:

Al_2O_3	$CaCO_3$	CuO	FeO	K_2O	MgO	Na_2O	NiO	P_2O_5	PbO	Rb_2O	SO_3	SiO_2
59	539	2	15	26	42	539	3	10	2	2	2792	260

Some of the impurities detected are soluble salts, in particular sodium sulfate that can be removed by improved washing of the final carbonate product.

The results are a clear demonstration of the ability to control the L-Max process and produce high quality products on a continuous basis. LIT

The processing of mica, to recover lithium, has a number of major advantages over other lithium recovery processes. One of the most significant advantages is the dissolution of all metals in the mica, and the ability to recover co-products. Initial financial evaluation of the process (ASX announcement 1 May 2015) based on the production of lithium carbonate, and ONLY a potassium sulphate (fertiliser) credit, suggests the production of lithium carbonate from mica, at a cost below $2000 per tonne, is realistic.

The ability to recover a range of other commercial products from the leach solutions will further improve the economics, potentially making the process the world's most economic means of producing lithium. LIT's technical partners, Lepidico Limited, has successfully produced value-added products from both silicon and aluminium.

PILGANGOORA

LITHIUM AUSTRALIA AND PILBARA MINERALS EXTEND AGREEMENT

As announced on 19 June 2015, LIT and Pilbara Minerals Limited (ASX: PLS) extended the terms of the MoU to evaluate the commercial potential of lithium micas within the Pilgangoora Project in WA. The MoU allows LIT to assess the commercial potential of lithium bearing micas that occur within the Pilgangoora Project area. LIT has exclusive Western Australian licensing rights over the only known technology able to produce lithium from WA deposits (L-Max technology) which is supplied by Perth based Lepidico Limited. L-Max technology is the only practical metallurgical process for the commercial recovery of lithium chemicals from micas. (Please note that Strategic Metallurgy Pty Ltd has assigned its right in the L-Max technology to Lepidico Limited.)

The MoU was initially executed in November 2014 and has been extended until 30 December 2015 to afford the parties the opportunity of analysing a more substantial database. Historic records and field observations strongly suggest the potential for lithium micas to increase north of the areas drilled to date.

WORK TO DATE

Previous metallurgical testing of Pilgangoora drill chips has demonstrated the ability to recover lithium from micas, albeit such micas occurred only in low concentrations from those areas sampled at the time. LIT has further demonstrated the ability to recover lithium chemicals from micas, in steady-state operation of a mini processing plant, which provides great encouragement that such materials can be economically processed in the future.

ABOUT THE PILGANGOORA PROJECTS

PLS controls significant resources of lithium within the Pilgangoora project. The lithium ore is hosted 120 km south-east of Port Hedland, in the Pilbara region of Western Australia (Figure 2).

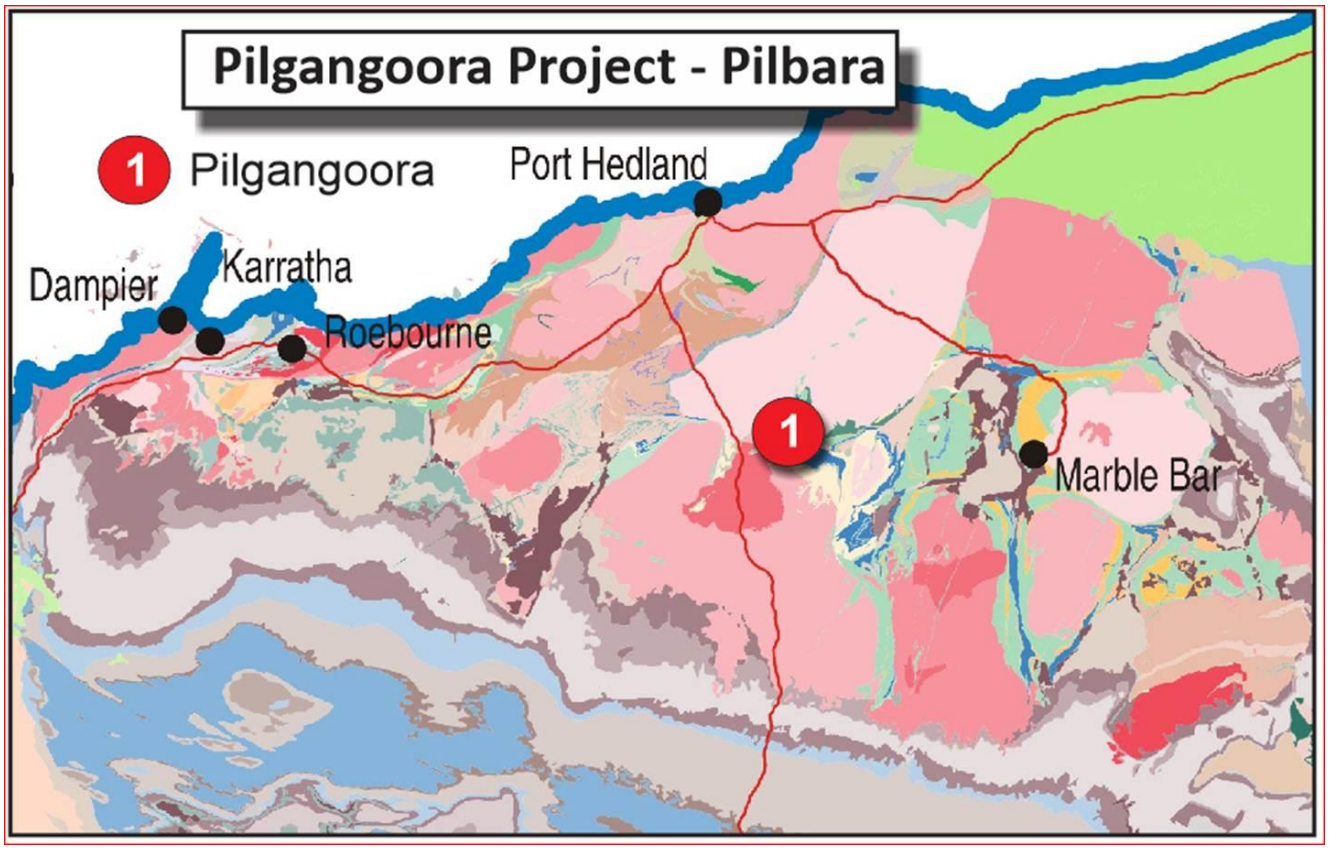


Figure 2 Location of the Pilgangoora lithium project

PLS released a major resource upgrade of a JORC 2012 Mineral Resource for the Pilgangoora Project incorporating the results of successful in-fill RC drilling program which was completed from May to August 2015. The Inferred and Indicated Lithium Resource amounts to 52.2Mt grading 1.28% Li_2O (spodumene) containing 668,000 tonnes of lithium oxide with, at a cut-off of 1% Li2O. Within the total Mineral Resource of 52.2Mt, and at a cut-off of 1% Li_2O, the Inferred and Indicated Lithium Resource amounts to 40.7Mt at 1.43% Li_20 containing 581,000 tonnes of lithium oxide. Please refer to the PLS release dated 1 October 2015.

The Lithium Resource and prospective lithium mica mineralization occurs within coarse grained intrusive rocks known as pegmatites (Figure 3) which outcrop extensively throughout the area.

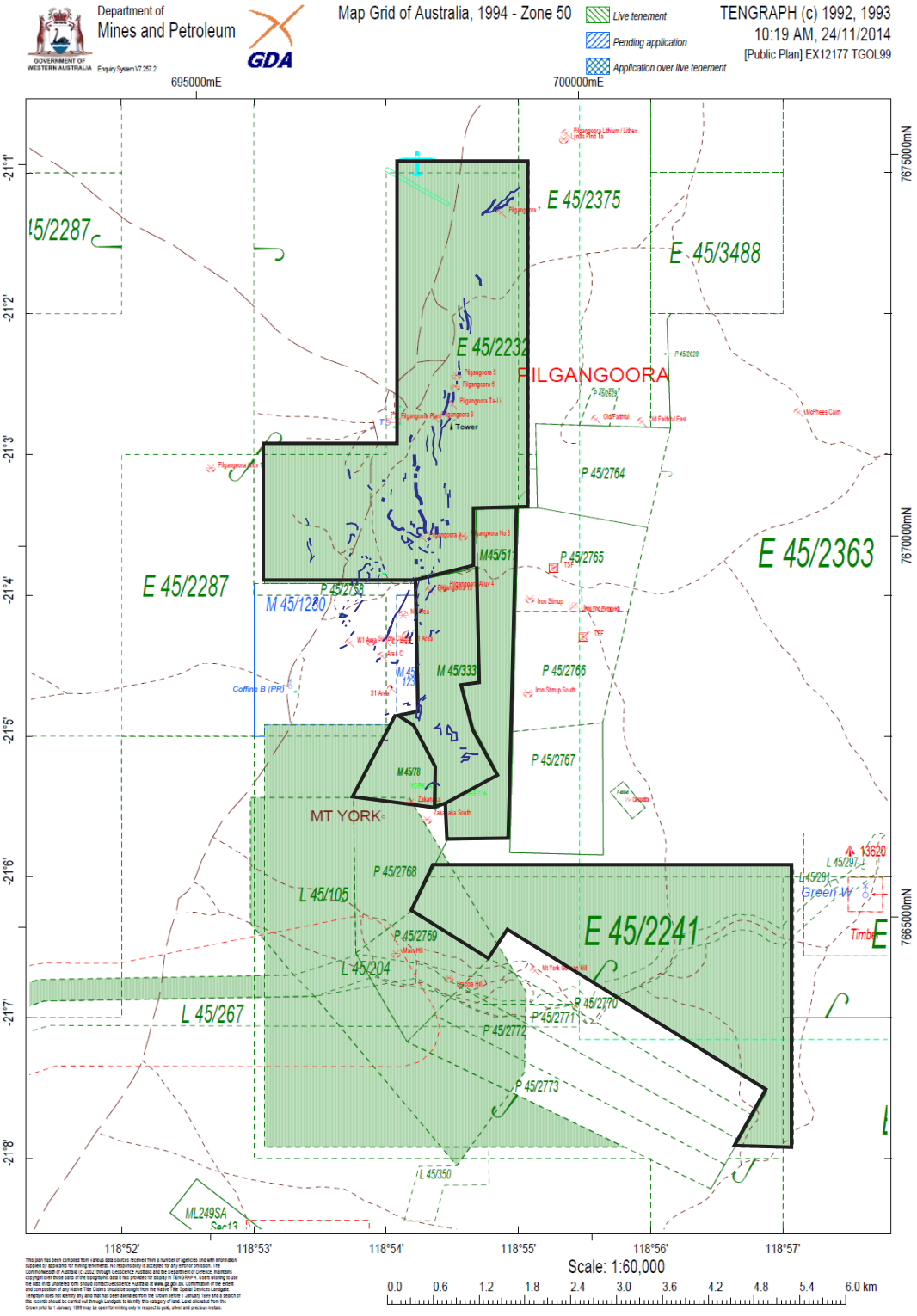


Figure 3. Tenement plan showing Pilbara Minerals, Pilgangoora project tenements with bold outline and mapped exposure of pegmatites (navy blue).

SEABROOK RARE METALS VENTURE (LIT 80%, Tungsten Mining (ASX: TGN) 20%)

Koolyanobbing Project – Seabrook Rare Metals Venture

In November 2014, the Company and Tungsten Mining entered into a binding agreement that provides for LIT to explore for lithium and other metals, on the shores of Lake Seabrook, approximately 60km north-east of Southern Cross, Western Australia. The agreement concerns tenements comprising Tungsten Mining's Koolyanobbing Project, notably E77/1853, E77/1854, E77/1855, E77/2021, E77/2022 and E77/2035 and extends to an area of influence of 20km outside of the Tungsten Mining Tenements. The Seabrook Rare Metals Venture (SRMV) provides LIT with a right to earn an 80% interest to all metals other than tungsten, the right of which remain or are vested in Tungsten Mining.

In August 2015, LIT announced that Exploration Licence 77/2279 for prospective ground at Lake Seabrook, covering pegmatites which contain lithium mica, beryl and tourmaline had been granted and that work undertaken on the expanded SRMV area had identified lithium pegmatites with lengths of up to 300m.

LIT is trialling a new geochemical technique designed for easier identification of potential buried pegmatites of the lithium, caesium, and tantalum (LCT) class. As part of this work, LIT collected soil samples over 7km of strike on the Seabrook Rare Metals Venture. These samples were analysed by field-portable XRF analytical equipment and a geochemical algorithm was used to displayed results as a 'heat map' of prospectivity. The heat-map indicates the relative intensity of certain geochemical indicators, which can be used to locate LCT pegmatites and the alteration halos associated with, or mineralising fluids emanating from them.

From this, LIT identified an area of high prospectivity, which is about 3km long and 500 - 600m wide, and remains open across the Koolyanobbing Shear, transgressing the boundary between a sequence of mafic and acid lithologies.

Significant alteration of the host lithologies – observed in areas of outcrop and tungsten mineralisation (as marked on Figure 4) – exists on the flanks of the target area. The tungsten mineralisation is interpreted to be a skarn and is probably associated with late-stage magmatic fluids, which create the target areas shown on the heat map.

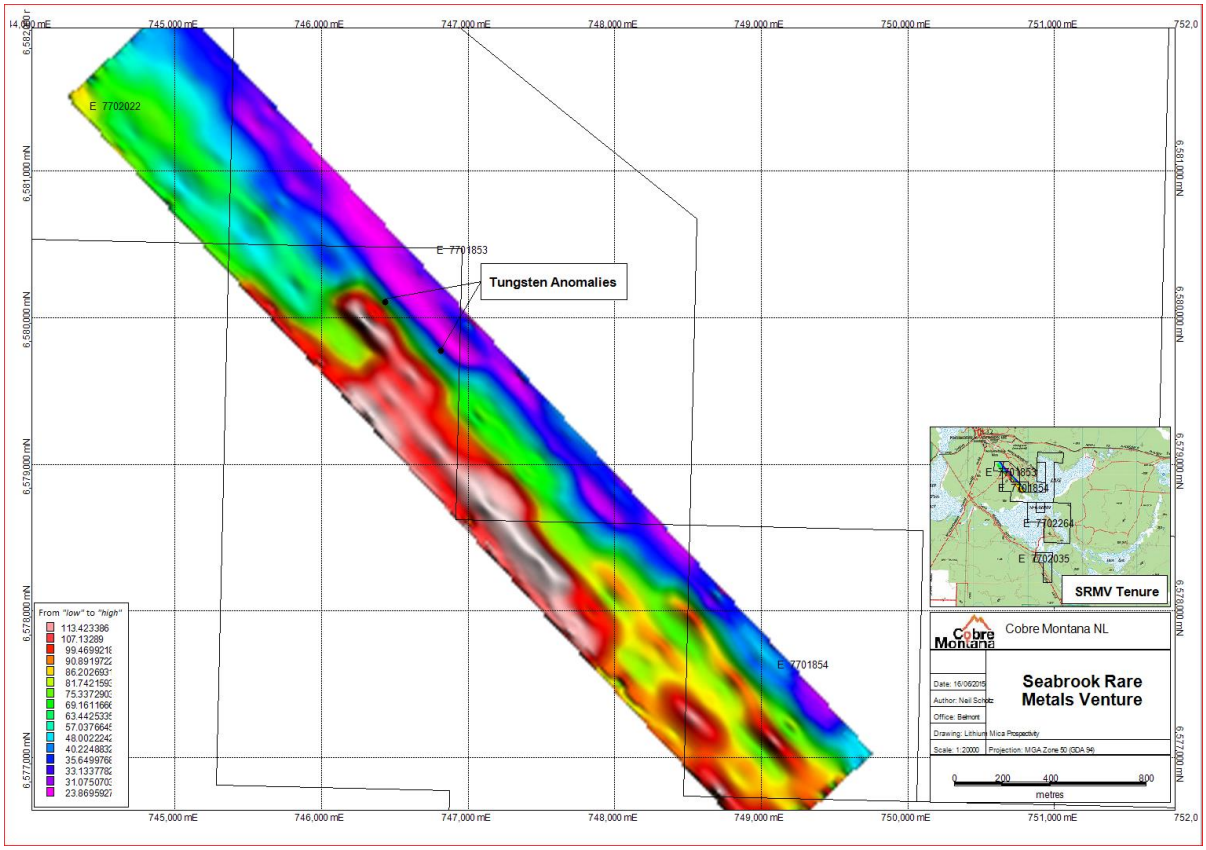


Figure 4. Heat map showing areas of high-potential for LCT pegmatites. The prospectivity has been defined by geochemical algorithms being applied to data generated from surface soil samples.

GREENBUSHES (LIT 100%)

The Company has applied for exploration licences in and around Greenbushes from where 38% of world supply of lithium is sourced. This area covers a 50km structural trend which is highly prospective for lithium pegmatites.

ABOUT LITHIUM AUSTRALIA

Lithium Australia (LIT) has exclusive technology licences to recover lithium from micas; minerals not generally used as a source of lithium chemicals. The Company considers this to be a disruptive technology with the potential to displace more conventional lithium production. LIT has a non-binding Heads of Agreement with European Metals Holdings Limited to process lithium mineralisation at Cinovec in the Czech Republic on a 50/50 JV basis. Cinovec contains abundant lithium micas and is one of the world's largest hard-rock lithium occurrences. In addition, LIT has strategic alliances with Pilbara Minerals Limited, Focus Minerals Limited and Tungsten Mining NL, to investigate lithium and rare metals in prospective locations of Western Australia close to well-developed infrastructure. LIT has lithium exploration assets near Greenbushes and Ravensthorpe in Western Australia. LIT is also evaluating other European opportunities.

