Lithium Australia NL

ASX ANNOUNCEMENT 31 October 2016

COMPANY DETAILS

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

PRINCIPAL AND REGISTERED OFFICE
Level 1
675 Murray Street
West Perth WA 6005

P +61 8 6145 0288
F +61 8 9475 0847

POSTAL ADDRESS
PO Box 1088
West Perth WA 6872

CORPORATE INFORMATION
(31 October 2016)
243M Ordinary Shares
133M Listed Partly Paid Shares
21M Unlisted Options
11M Performance Rights

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

For further information contact:

Lithium Australia NL
Adrian Griffin (MD)

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LITHIUM AUSTRALIA QUARTERLY REPORT FOR SEPTEMBER 2016 DISRUPTIVE LITHIUM CHEMICAL PRODUCTION TO FUEL THE NEW INDUSTRIAL REVOLUTION

Report for the quarter ending
30 SEPTEMBER 2016

HIGHLIGHTS

- LIT advised a discovery in the Electra Joint Venture in Sonora Mexico with Alix Resources Inc (TSVX: AIX) including advising an intention to increase its interest to 49%
- LIT doubled its footprint in WA's Greenbushes and commenced exploration there - the world's most productive hard-rock lithium province
- LIT acquired the Widgiemooltha Project lithium rights with Cazaly Resources Ltd (ASX: CAZ) through the Goldfields Lithium Alliance (GLiA)
- LIT and ANSTO Minerals completed its pilot plant test on ore from Lepidolite Hill with WA Government support and Federal Government support; results pending
- LIT expands its strategic lithium holdings in WA's Gascoyne
- LIT in maiden move into Queensland as part of an enlarged Australia-wide lithium search
- LIT shareholders to benefit from MetalsTech IPO (formerly LiGeneration)
- LIT advised first Board appointments for Graphite Australia NL and tenure granted on two exploration licences
- LIT completes 5 cent contributing shares and lists the 25 cent contributing shares series

SUBSEQUENT EVENTS

- LIT advised exceptional results in continuous Sileach™ pilot plant run
- LIT and Lefroy Exploration Ltd (ASX: LEX) complete strategic consolidation of Lake Johnston lithium pegmatite field and discovers lithium pegmatites with rock chip samples up to 3.94% Li_2O
- LIT launches Shareholder Purchase Plan to raise up to $12.5m

MEDIA CONTACT:

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Kevin Skinner	**Field Public Relations**	**08 8234 9555 | 0414 822 631**

SUMMARY

Lithium Australia (ASX: LIT) has been successful in developing its own unique hydrometallurgical process, the Sileach™ process which allows lithium to be extracted from spodumene without roasting. This is seen by industry and end users as a significant breakthrough. LIT continues to assess lithium projects worldwide and is actively reviewing opportunities in Africa, Europe, the Americas and Australia.

THE SILEACH™ PROCESS: A PROCESSING BREAKTHROUGH

LIT has successfully developed a unique hydrometallurgical process, the Sileach™ process, for the recovery of lithium from spodumene, currently the primary source of hard-rock lithium production. The Sileach™ process is also readily adaptable to other silicate minerals and has been developed to reduce the cost of producing lithium chemicals from materials that have traditionally been roasted to recover the lithium, with very high energy costs.

Independent laboratory tests of the Sileach™ process have achieved lithium extractions from alpha spodumene of up to 92% in 4 hours.

Lithium Australia continues to differentiate itself in the lithium space through developing the Sileach™ process technology to convert concentrate to carbonate or other customer specified lithium chemicals, target feedstock for the Sileach™ process. Being a key player in the future of the lithium chemical supply chain is not just about producing a concentrate, it is about delivering to the customer what they want which is a lithium chemical product at a low cost. Technology is the key to the success which LIT is developing through its Sileach™ technology.

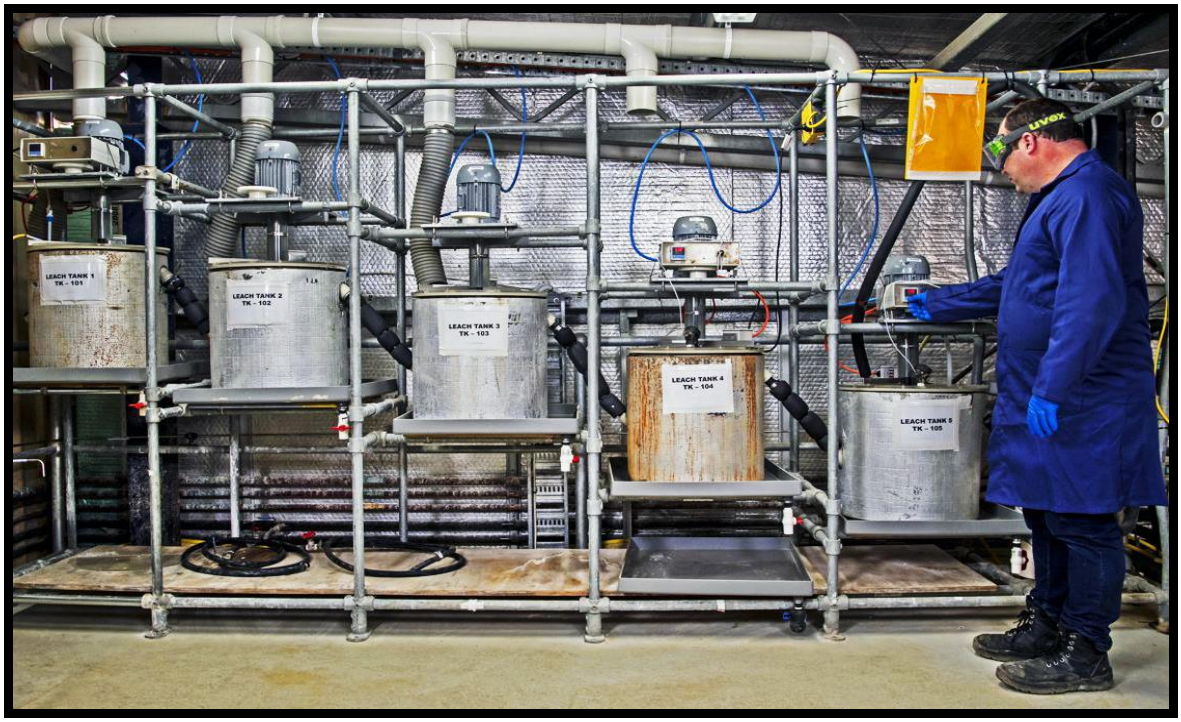

Figure 1 Sileach continuous pilot plant operation, ANSTO Minerals, Lucas Heights, NSW

THE OPPORTUNITY

The Sileach™ process has the potential to release the value of stranded lithium silicate deposits – those deposits quarantined by sub-economic grades.

The Sileach™ process has the ability to transform low-grade spodumene occurrences into viable ore as, due to lower projected operating costs, it is less sensitive to feed grade. This will result in lower cut-off grades for resource calculations, expansion of existing resources without the requirement for further drilling, and greater recovery of metal inventories.

As the lithium is precipitated from solution in the Sileach™ process, all impurities in lithium silicate feed can be rejected during the production of lithium chemicals. Contaminated or low-grade spodumene concentrates, and other silicates, in which impurity concentrations would otherwise render them unmarketable, may now be considered viable process feed.

PROJECT SPECIFICS

THE PILBARA, WESTERN AUSTRALIA

Of significance is the agreement with Pilbara Minerals Ltd to jointly progress the Sileach™ technology for potential future production of low-cost lithium carbonate in the currently proposed WA processing hub. This may include low-grade spodumene, micas and clays, which in the past may have been sub economic. All of these materials can be processed with the Sileach™ process.

Comment: There are difficulties in obtaining spodumene supplies in Australia. LIT cannot stress highly enough the importance of obtaining a **reliable Australian** supply of good quality spodumene. LIT notes recent commercial settlement between PLS and Mineral Resources Ltd (ASX: MIN) (see PLS releases dated 26 October 2016). This settlement highlights the increased valuations placed on lithium assets and currently indicates a robust future for this burgeoning industry.

THE YILGARN BLOCK, WESTERN AUSTRALIA

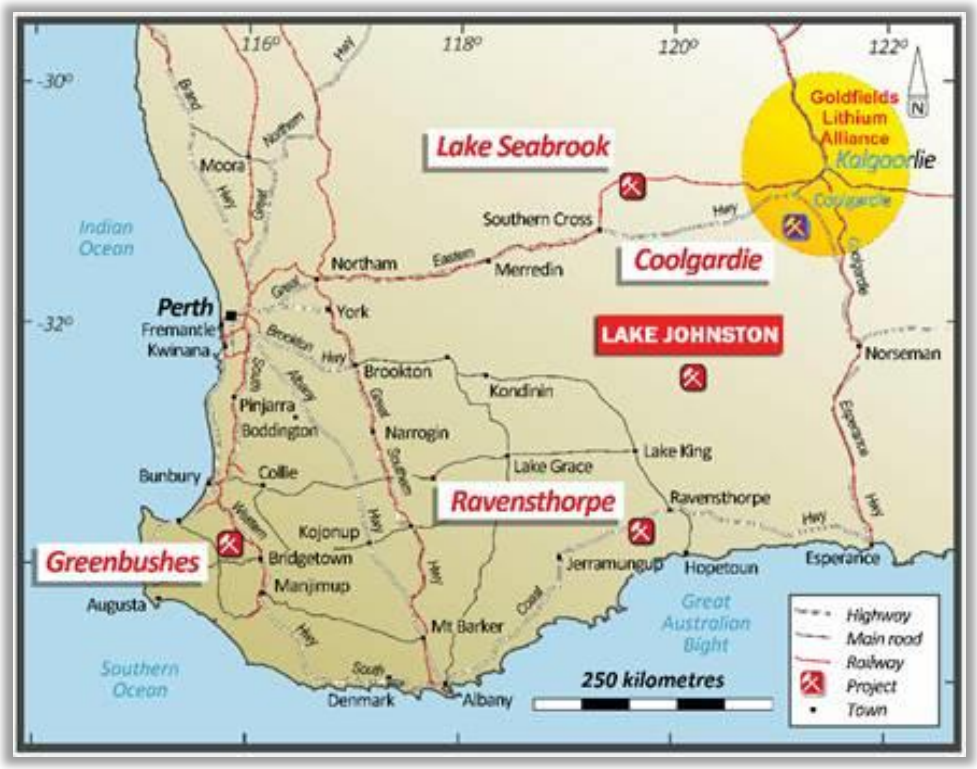

Figure 2 Lithium Australia's Yilgarn Block Projects

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

Laser-induced breakdown spectroscopy (LIBS), a field-portable assay technology was used to compare geochemical indicators (alkali metals) for lithium, with LIBS determined lithium concentrations in soil samples. Results of the program are yet to be released.

GREENBUSHES - A premium address (LIT 80%)

In recent times, there has been significant interest rekindled in the Greenbushes, Western Australia, with many junior explorers attracted by the obvious exploration potential of the area which currently produces about 40% of the world's lithium from just one mining operation.

The Greenbushes pegmatite is probably not alone and the large number of pegmatites in the area provides significant scope for renewed exploration activities.

Despite being an active mining area since the 1880s, there remains great exploration potential in the region. Much of the prior exploration work was focused on tin and tantalum but today a new wave of exploration tools paves the way for applying advanced techniques to the exploration for lithium.

LIT commenced work with low-impact exploration. Immediate evaluation will include remote sensing, field mapping and real time lithium assays using) a real-time, field portable exploration technique that provides assay capability for light elements, including lithium.

Field reconnaissance commenced in April 2016 (ASX Release dated 27 April 2016) and LIT doubled its footprint in the area as advised via an ASX Release dated 6 July 2016.

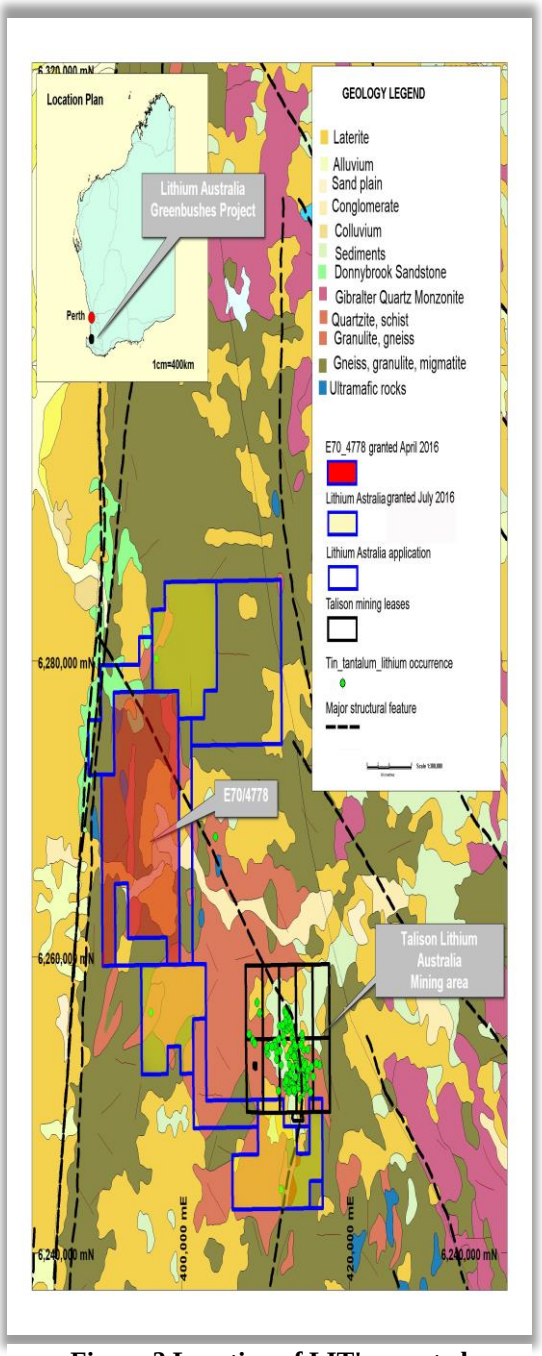

Figure 3 Location of LIT's granted exploration licence and further licence applications

RAVENSTHORPE (LIT 100%)

LIT holds exploration licence E74/0543 with an area of 70 km^2 and covering a 20 km long structural trend which is highly prospective for lithium pegmatites (Figure 3). The corridor extends southwest from the Mt Cattlin lithium and tantalum hard rock operations of Galaxy Resources Limited and General Mining which are currently being commissioned. The project is well supported by established transport routes, nearby infrastructure and services at Ravensthorpe. The large, deep water port of Esperance is 185 km east of Ravensthorpe.

The southern extension of E74/0543 overlies the Cocanarup pegmatite field and contains three large outcropping pegmatite bodies. Field inspection has confirmed zinnwaldite and lepidolite (lithium "micas") outcropping over large areas. Work by previous operators focused on tantalum with disappointing results but historic mapping and sampling has provided LIT with confidence that mapped pegmatites have the potential to host large tonnages of lithium mineralisation. During the June 2016 quarter, LIT received permitting approval for its initial Ravensthorpe drilling program. Further information is contained in the ASX Release dated 1 June 2016.

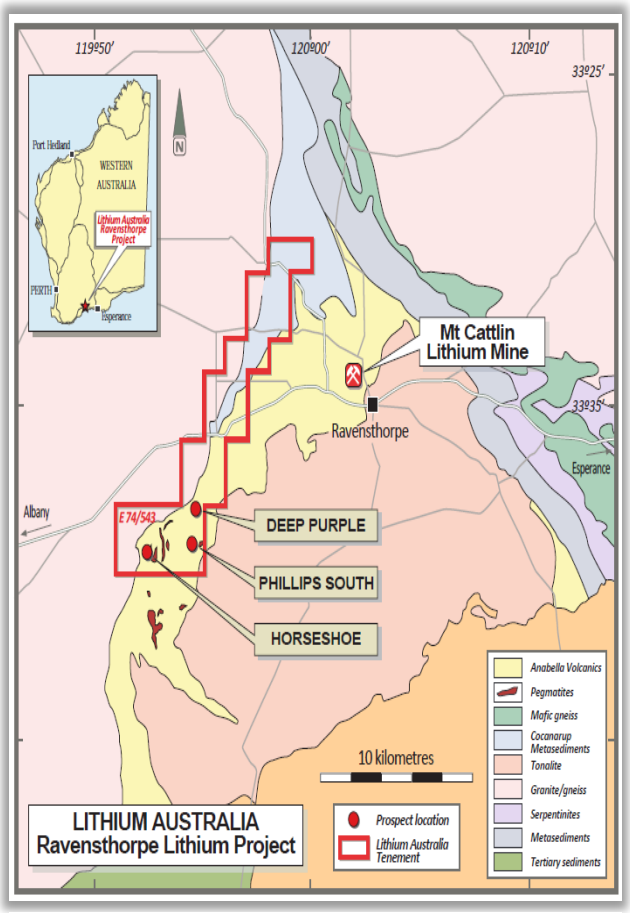

Figure 4 Ravensthorpe Lithium Project, including prospect locations

Recent fieldwork at LIT's Ravensthorpe Lithium Project has resulted in the discovery of several additional lithium pegmatites. It is now established that there are at least 12 lithium pegmatites present giving the project significant economic potential.

LIT fieldwork led to definition of an exploration target[1] at the "Horseshoe prospect" of 900,000 tonnes of lithium mineralisation at a minimum grade of 1% Li_2O (with a size range from 525,00t to 1,281,000t and grade range of 0.8% - 1.2%). Significant mineralisation has also been identified at the Deep Purple Prospect to the north-east of the Horseshoe Project and at the Phillips South Prospect, due east of Horseshoe.

[1] *Exploration Target: The potential quantities and grades are conceptual in nature and there has been insufficient exploration to-date to define a Mineral Resource. It is not certain that further exploration will result in the determination of a Mineral Resource under the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code" (JORC 2012). The Exploration target is not being reported as part of any Mineral Resources or Ore Reserve.*

LAKE JOHNSTON LITHIUM PEGMATITE FIELD (LEFROY EXPLORATION LIMITED (ASX: LEX) AND LIT)

The Lake Johnston pegmatite field, which is proximal to Poseidon Minerals Ltd's (ASX: POS) Maggie Hays and Lake Johnston operations, is located 440 km east of Perth, Western Australia (Figure 1) and serviced by supporting infrastructure.

LIT's transaction with LEX provides LIT with access to most of the Lake Johnston lithium pegmatite field, in that all lithium rights in the following areas will be ceded to LIT (see Figure 4).

- E63/1722 - LEX granted exploration licence
- E63/1723 - LEX granted exploration licence

LIT's acquisition of lithium rights from LEX, within granted tenure, provides LIT with immediate exploration opportunities in the area. LIT has issued 9 million shares to Lefroy Exploration Ltd for lithium rights. LEX has issued 3 million shares to LIT for gold and nickel rights.

Further information in relation to this transaction is contained in the ASX Release dated 20 June 2016, 18 October 2016 and 25 October 2016.

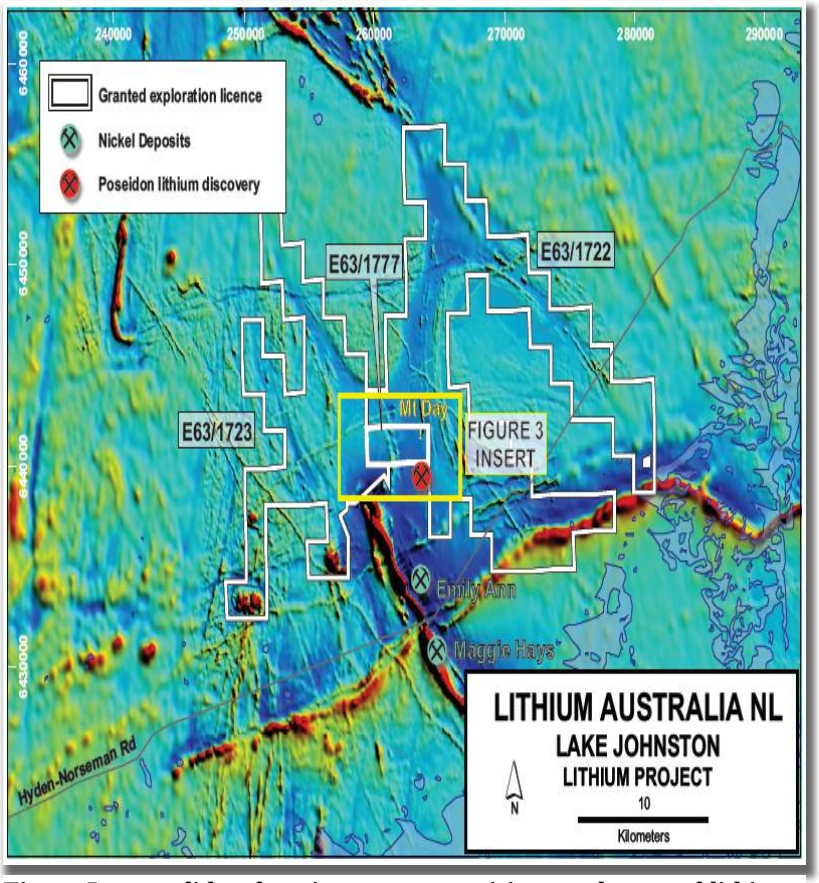

Figure 5 - consolidated project area comprising amalgamated lithium rights that benefit LIT. Brittle rocks, conducive to pegmatite intrusion, are represented by the dark blue hues in this magnetic image. The source magmas may be preserved in paler blue ovoid.

BYNOE NORTHERN TERRITORY (LIT 100%) FIRST STAGE EXPLORATION

LIT has established a foothold in the highly prospective Bynoe Pegmatite Field (see Figure 5). The Bynoe Project is located 50 km south-southwest of Darwin, capital of the Northern Territory, close to infrastructure. Despite the favourable location, exploration in the area has to date been restricted and of narrow focus with little work undertaken on lithium.

The Bynoe Project lies within the Bynoe Pegmatite Field, the latter being the main part of the larger Litchfield Pegmatite Belt. Located along the western margin of the Pine Creek Orogen – which is of Palaeoproterozoic age – the Litchfield Pegmatite Belt is almost 200 kilometres long and has been intruded by a suite of highly differentiated 'S-type' granites, believed to be the source of the pegmatites. Pegmatites abound (there are more than 100 in the Bynoe Pegmatite Field alone) and many have been exploited for their tin and tantalum mineralisation.

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Mining within the Bynoe Pegmatite Field commenced in 1888, exploiting mainly surface deposits of tin created by the weathering and erosion of the pegmatites. Later, explorers focused on the tin and tantalum potential of those pegmatites (e.g. Greenex; Bourke, 2011). **However, only very recently has the possibility of significant lithium mineralisation been considered.** Recent drilling in an area that abuts LIT's NT licence is indicative of lithium mineralisation.

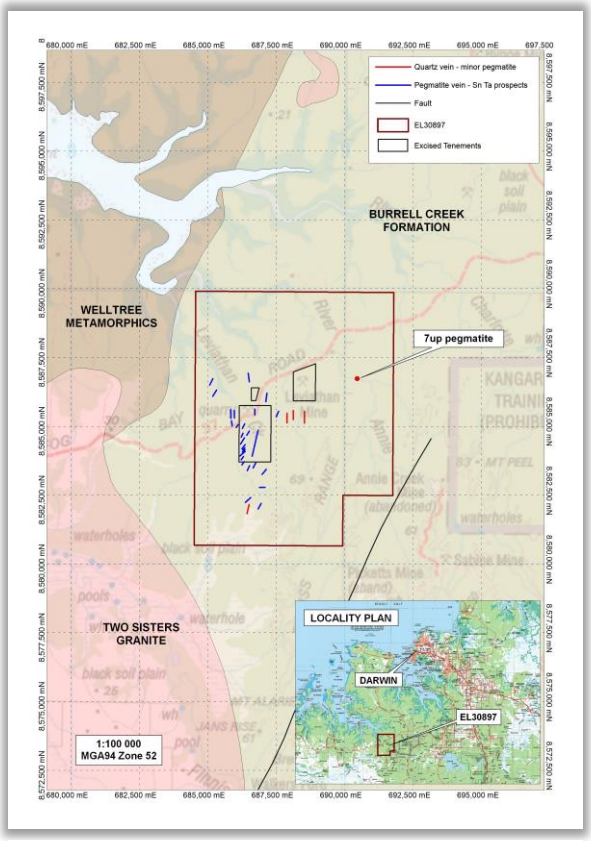

Figure 6 Location of LIT's Bynoe Lithium Project

Note that Core Exploration's tenements EL 31126 and EL 31127 (figure 5 of CXO's ASX release dated 25 October 2016) confirms a highly prospective area. LIT will be commencing exploration activities soon, or may consider corporate opportunities consistent with its current approach.

ELECTRA JV (Sonora, Mexico) LIT 25%, AIX 75%

The Electra project is a farmin and JV in which LIT can earn up to 65% of the project from its partner, TSX Venture listed Alix Resources Corporation (TSX-V: AIX) (Alix). The Sileach™ process, together with other processes will be tested on this project when materials are available.

Subsequent to quarter end LIT advised a new discovery, now part of the Electra Project,. The new discovery "Agua Fria" abuts the Tule prospect to the south (Figure 5).

Fertile clays, within the geological environment of the project area, generally exhibit low lithium grades. Results in the range of 100-200 ppm Li may be considered to be anomalous and grades in excess of 1000ppm are often included in Resource calculations, as exemplified in numerous studies undertaken by AIM and TSX listed Bacanora Minerals plc.

The new lithium-clay discovery and the recently applied for Agua Fria concession (Figure 1) will comprise a portion of the Electra Project, which at present is owned 25% by LIT and 75% by Alix.

The Alix assays result from surface reconnaissance sampling within the new concession application and, are clearly anomalous, ranging from 347ppm to 1000ppm Li.

The anomalous clay bearing horizon is shallow-dipping and has been traced over a strike length of one kilometre and has an apparent thickness of 20-30 metres.

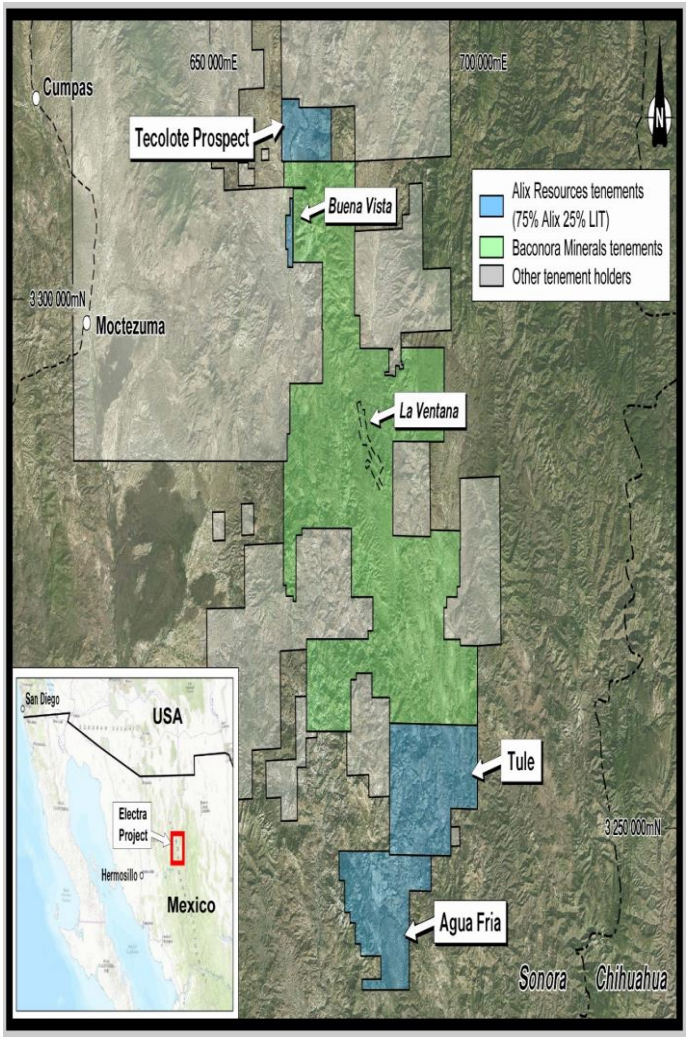

Figure 7 - Location of LIT's Electra Lithium Project

ABOUT LITHIUM AUSTRALIA

LIT is a dedicated developer of disruptive lithium extraction technologies. LIT has strategic alliances with a number of companies, potentially providing access to a diversified lithium mineral inventory. LIT aspires to create the union between resources and the best available technology and to establish a global lithium processing business.

Competent Person Statement

The information in this report that relates to Exploration Results together with any related assessments and interpretations is based on information compiled by Mr Adrian Griffin, Managing Director of Lithium Australia NL. Mr Griffin is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

LISTING RULE 5.3.3 INFORMATION

LIT TENEMENTS	PROJECT	NOTES	DATE
P15/5519	COOLGARDIE	GRANTED	3/02/2011
M15/664	COOLGARDIE	GRANTED	14/09/1993
M15/1809	COOLGARDIE	GRANTED	04/02/2013
P15/5574 S	COOLGARDIE	GRANTED	10/08/2011
P15/5575 S	COOLGARDIE	GRANTED	10/08/2011
P15/5625	COOLGARDIE	GRANTED	9/08/2013
P15/5626	COOLGARDIE	GRANTED	14/12/2011
P15/5629	COOLGARDIE	GRANTED	9/08/2013
P15/5739	COOLGARDIE	GRANTED	17/01/2013
P15/5740	COOLGARDIE	GRANTED	17/01/2013
P15/5741	COOLGARDIE	GRANTED	17/01/2013
P15/5742	COOLGARDIE	GRANTED	17/01/2013
P15/5743	COOLGARDIE	GRANTED	17/01/2013
P15/5749	COOLGARDIE	GRANTED	3/04/2013
E45/2232	PILGANGOORA	GRANTED	17/11/2005
E45/2241	PILGANGOORA	GRANTED	24/04/2002
M45/78	PILGANGOORA	GRANTED	28/11/1984
M45/333	PILGANGOORA	GRANTED	17/06/1988
M45/511	PILGANGOORA	GRANTED	11/09/1991
E74/0543	RAVENSTHORPE	GRANTED	24/01/2014
E70/4778	GREENBUSHES	GRANTED	19/04/2016
E70/4788	GREENBUSHES	GRANTED	01/07/2016
E70/4789	GREENBUSHES	GRANTED	01/07/2016
E70/4790	GREENBUSHES	GRANTED	01/07/2016
E70/4811	KAURING 1 GREENHILLS GRAPHITE+	GRANTED	26/08/2016
E70/4812	KAURING 2 GREENHILLS GRAPHITE+	GRANTED	26/08/2016
E70/4824	YANMAH DONNELLY GRAPHITE+	GRANTED	22,09,2016
E77/1853	LAKE SEABROOK	GRANTED	22/09/2011
E77/1854	LAKE SEABROOK	GRANTED	22/09/2011
E77/1855	LAKE SEABROOK	GRANTED	22/09/2011
E77/2021	LAKE SEABROOK	GRANTED	26/06/2012
E77/2022	LAKE SEABROOK	GRANTED	26/06/2012
E77/2035	LAKE SEABROOK	GRANTED	5/09/2012
E77/2279	LAKE SEABROOK	GRANTED	27/07/2015
EL 30897	ANGERS	GRANTED	22/03/2016

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

Name of entity

Lithium Australia NL

ABN	**Quarter ended ("current quarter")**
21 126 129 413	30 September 2016

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (3 months) $A'000**
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(273)	(273)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(175)	(175)
	(e) administration and corporate costs	(276)	(276)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	11	11
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other (provide details if material)	-	-
1.9	**Net cash from / (used in) operating activities**	**(713)**	**(713)**

2.	**Cash flows from investing activities**		
2.1	Payments to acquire:		
	(a) property, plant and equipment	(55)	(55)
	(b) tenements (see item 10)	-	-
	(c) investments	(100)	(100)
	(d) other non-current assets	(491)	(491)

Consolidated statement of cash flows		Current quarter $A'000	Year to date (3 months) $A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	**Net cash from / (used in) investing activities**	**(646)**	**(646)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of shares	1,027	1,027
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(28)	(28)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other	-	-
3.10	**Net cash from / (used in) financing activities**	**999**	**999**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	5,757	5,757
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(713)	(713)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(646)	(646)

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (3 months) $A'000**
4.4	Net cash from / (used in) financing activities (item 3.10 above)	999	999
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period**	**5,397**	**5,397**

5.	**Reconciliation of cash and cash equivalents** at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	**Current quarter $A'000**	**Previous quarter $A'000**
5.1	Bank balances	41	104
5.2	Call deposits	5,356	5,653
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**5,397**	**5,757**

6.	**Payments to directors of the entity and their associates**	**Current quarter $A'000**
6.1	Aggregate amount of payments to these parties included in item 1.2	96
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Payments to directors and employees for services to the economic entity.

7.	Payments to related entities of the entity and their associates	Current quarter $A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

8.	Financing facilities available *Add notes as necessary for an understanding of the position*	Total facility amount at quarter end $A'000	Amount drawn at quarter end $A'000
8.1	Loan facilities	-	-
8.2	Credit standby arrangements	-	-
8.3	Other (Lanstead & LITCE's)	34,762	-

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

Lanstead – Sharing Agreement dated 14 January 2016

LITCE's - Current outstanding amounts on LITCE – 25 cent contributing shares

9.	Estimated cash outflows for next quarter	$A'000
9.1	Exploration and evaluation	200
9.2	Development	600
9.3	Production	0
9.4	Staff costs	250
9.5	Administration and corporate costs	400
9.6	Other (provide details if material)	0
9.7	**Total estimated cash outflows**	**1,450**

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	P15/4950	Tenement surrendered	40%*	0%
		P15/4951	Tenement surrendered	40%*	0%
		P15/4952	Tenement surrendered	40%*	0%
		P15/4953	Tenement surrendered	40%*	0%
		P15/4916	Tenement surrendered	40%*	0%
		P15/4917	Tenement surrendered	40%*	0%
10.2	Interests in mining tenements and petroleum tenements acquired or increased	E70/4788	Tenement granted	0%	100%
		E70/4789	Tenement granted	0%	100%
		E70/4790	Tenement granted	0%	100%
		E70/4811+	Tenement granted	0%	100%+
		E70/4812+	Tenement granted	0%	100%+
		E70/4824+	Tenement granted	0%	100%+

* As part of the Goldfields Lithium Alliance
+ On behalf of Graphite Australia NL

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
2 This statement gives a true and fair view of the matters disclosed.

Sign here: "Barry Woodhouse" Date: 31 October 2016
(~~Director/~~Company secretary)

Print name: Barry Woodhouse.

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.