

# **New Mozambique Lithium Licenses**

ASX: Li3

9 July 2019

- Expansion of land position through the grant of three additional licenses, including the strategically significant 9166L license
- Outcropping pegmatites have significant potential for extensions at shallow depths, which can be confirmed through modern lithium-focussed exploration
- Mozambique is on the east coast of Africa, with multiple bulk-handling ports and well-developed road and rail infrastructure for mining
- Mozambique is a pro-mining jurisdiction
- Li3 remains the first and only ASX listed company to enter Mozambique for hard rock lithium

Further to the announcement dated 25<sup>th</sup> March 2019 Lithium Consolidated Ltd ("**Lithium Consolidated**", "**Li3**" or the "**Company**") is pleased to announce it has been granted three (3) new lithium exploration licenses in the Alto Ligonha Pegmatite Province in northern Mozambique (the "**Mozambique Licenses**" or "**Licenses**") (see Figure 1).

The three (3) newly granted Licenses are in addition to the two (2) Licenses, which were granted and announced on 25 March 2019, such that the Company now holds a total of five (5) Licenses over an area of 31,481 ha (314.8 km<sup>2</sup>) in the Alto Ligonha Pegmatite Province ("**ALPP**") in Mozambique.

The ALPP contains a large concentration of pegmatites, including many examples of Lithium Caesium Tantalum ("LCT") family of pegmatites, which have been mined since the 1920's.

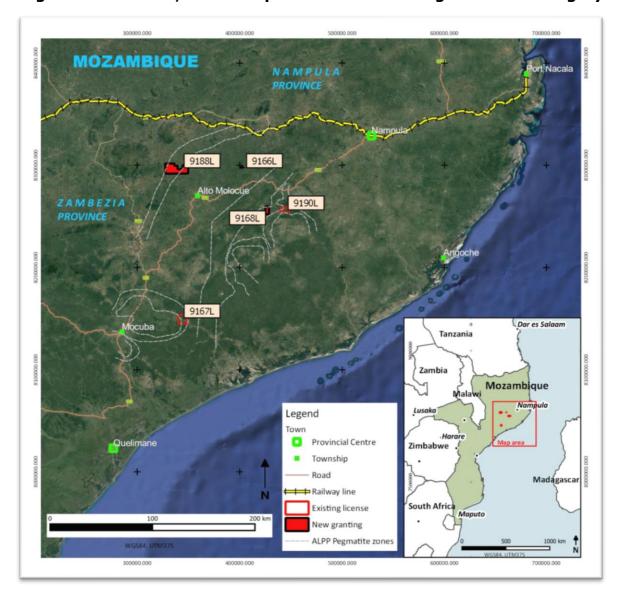
Mozambique was the world's second largest beryl producer in the 1960's, but the lithium-bearing minerals were not exploited from the same pegmatites during the historical beryl and tantalite mining.

The ALPP's current exploration maturity is analogous to that which existed in the Pilbara and Yilgarn Craton pegmatites of Western Australia, approximately 10 years or so ago,

prior to the modern lithium-focused exploration, which resulted in the definition of large lithium resources in the Pilgangoora, Wodgina, and Earl Grey pegmatites.

Northern Mozambique has well-developed infrastructure for mining. The Mozambique Licenses are in close proximity to the Mocuba – Nampula main road, a sealed, all weather road. The recently upgraded Nacala railway corridor connects Nampula to the natural deep-water port of Nacala, which is the principal port for the export of coal from mining operations at Moatize.

#### Figure 1. License areas and regional infrastructure within the Alto Ligonha Pegmatite Province, Mozambique. Shown over Google satellite imagery.



	License	Status	No. of Licenses	Area	Historical or artisanal mining
1.	License 9167 L	Granted	1	7,137 ha	Tantalite and beryl
2.	License 9190 L	Granted	1	3,840 ha	Beryl and tantalite
3.	License 9166 L	Granted	1	91 ha	None recorded
4.	License 9168 L	Granted	1	2,743 ha	Beryl and tantalite – columbite series minerals
5.	License 9188 L	Granted	1	17,670 ha	Possible beryl and rare- metal minerals
	Total		<b>5</b> <sup>(a)</sup>	31,481 ha	

#### **Table 1. ALPP Granted Exploration Licenses**

Note:

(a) Additional Licenses under application for new areas of interest.

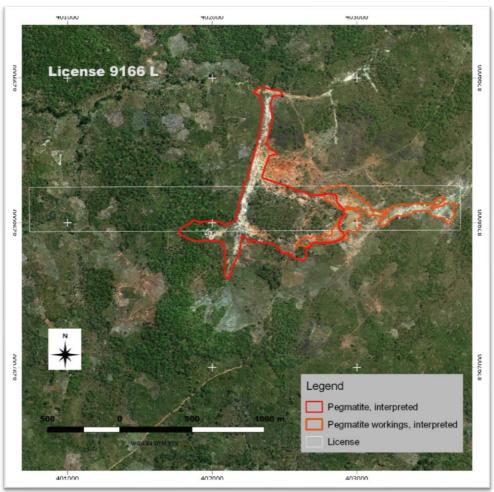
### License 9166 L

License 9166 L is located approximately 50km northeast of Alto Molocue and is situated on an interpreted pegmatite not recorded in prior maps of the region (Figure 2).

The area comprises undifferentiated rocks of the Nampula Complex, banded biotite gneisses and migmatitic biotite gneisses.

Satellite imagery interpretation and analysis has identified extensive artisanal workings which appear to be located on a potentially large pegmatite body. The extent of the artisanal workings and the spectral response within the satellite imagery indicates the possibility of a large pegmatite body within the license area that requires field checking.

#### Figure 2. License 9166 L – Location plan with interpreted pegmatite over ESRI satellite imagery



#### License 9168L

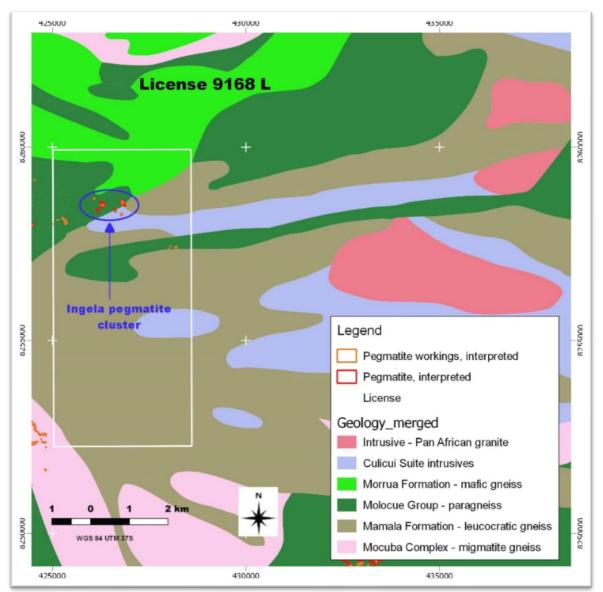
License 9168L is located in the northeast of the ALPP within the Alto Ligonha pegmatite field (Figure 3a and b) in close proximity to License 9190L.

The host rocks to the pegmatites largely comprise of gneisses from the Mamala Gneiss, the Molócuè Group and the Culicui Suite of the Nampula Complex.

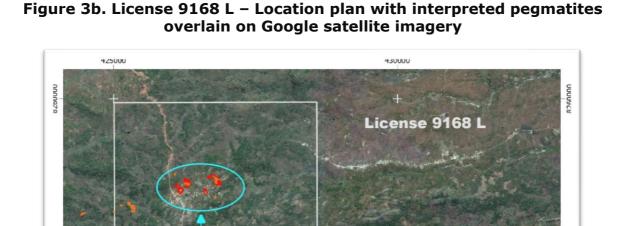
The Molócuè Group comprises metapelites and metapsammites with subordinate interlayered marble, calc-silicates, felsic and mafic rocks and host the majority of the known lithium mineralized pegmatites in the region. The younger granites of the Murrupula Suite are considered to be associated with the pegmatites, and outcrop to the east of the license area.

Tracts of artisanal workings have been interpreted from satellite imagery over four (4) distinct areas within the license boundaries. Three (3) of these are over pegmatites within the Ingela pegmatite occurrence.

Beryl and tantalite-columbite series minerals have been reported from the Ingela pegmatites.



# Figure 3a. License 9168 L – Location plan with interpreted pegmatites and geology



Legend

Pegmatite, interpreted

License

12000/

Pegmatite workings, interpreted

1755000

a pegmatiti cluster

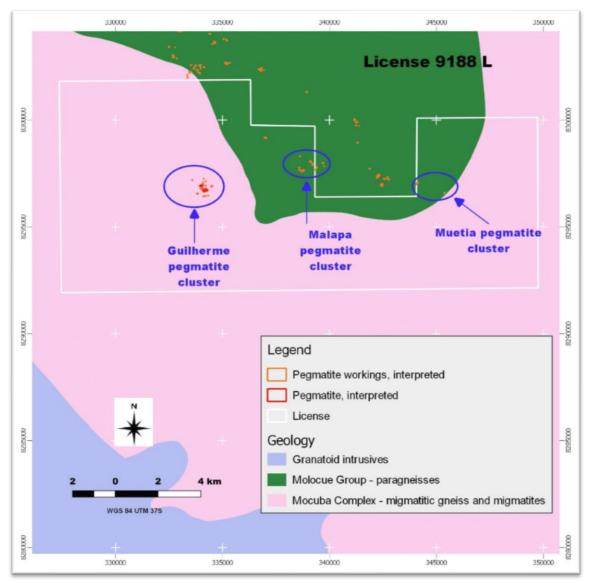
#### License 9188 L

425000

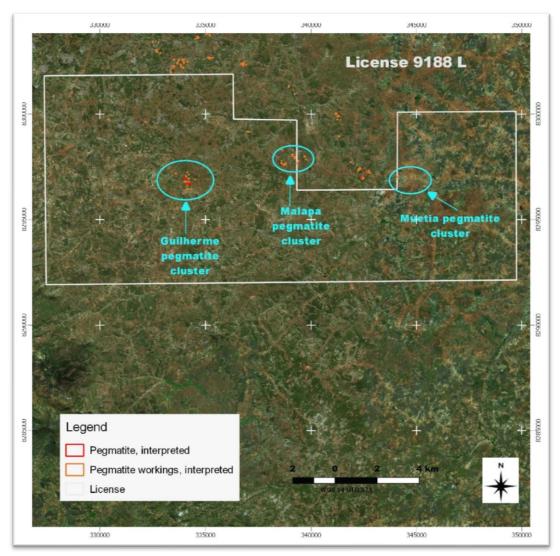
License 9188 L is located in the northern part of the ALPP within the Nauela Pegmatite Field (Figure 4a and b).

The license area is largely underlain by granitic gneisses from the Culicui Suite. Other rock types within the area include amphibolite, mafic gneisses, and various biotite gneisses from the Mocuba complex.

Three pegmatite clusters are known within the large license area: Guilherme, Malapa, and Muetia. Two of these have been identified as having workings over them through satellite imagery interpretation. Only a small number of features representing possible workings can be interpreted in the area of the Muetia cluster. The pegmatites are described as belonging to the sodalithic class (which corresponds to the LCT family of pegmatites).



# Figure 4a. License 9188 L – Location plan with interpreted pegmatites and geology



#### Figure 4b. License 9188 L – Location plan with interpreted pegmatites over ESRI satellite imagery

### Alto Ligonha Pegmatite Province Geology

The Alto Ligonha Pegmatite Province has:

- Pegmatites famous for their gemstones, rare-element minerals such as beryl, columbo-tantalite, and for being a source of rare and unique mineral specimens. Certain of these pegmatites also contain lithium minerals that have not previously been exploited;
- outcropping pegmatites, including a number of abandoned historical workings, which have significant potential for extensions at shallow depths, which can be realized through modern lithium-focused exploration; and
- the potential for delineation of larger, pegmatite hosted lithium mineralisation through modern lithium-focused exploration.

The Alto Ligonha Pegmatite Province is largely located in the NNE - SSW trending Namama Thrust Belt/Shear Zone and extends from Mocuba in the southwest to approximately 100km northeast of Alto Molocue in the northeast in the Zambézia Province of northern Mozambique (Figure 5).

The geology is dominated by rocks of the Nampula Complex within the Mesoproterozoic Mozambique Belt, predominantly medium to high-grade gneisses. These rocks were reworked during the Pan-African Orogeny involving the amalgamation of east and west Gondwana. The orogeny involved the emplacement of several nappe sheets, which have been preserved, followed by deformation, metamorphism and granitic magmatism. The pegmatites were emplaced late to post-orogenic and are distributed in four main zones, of which three coincide with major structural features (see Figure 5).

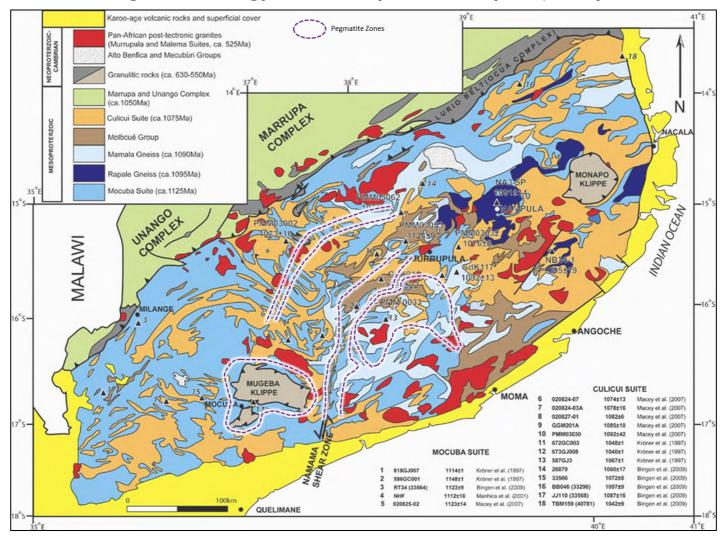


Figure 5 – Geology of the ALPP (Source: Macey et al, 2010)

Many of the pegmatites have characteristics of the **LCT** family, and some have characteristics of the **NYF** (Niobium-Yttrium-Fluorine) family. The LCT family can be further subdivided into sodalithic and potassic beryl types, corresponding to the Complex and the Beryl types of Cerny (1991) respectively. Both of these types can be defined to belong to the Lithium subclass of the Rare-Element pegmatites. The sodalithic type pegmatites considered to be the most prospective for lithium mineralization. Other types of pegmatites present include potassic rare-earth amazonite and tourmaline bearing sub-types (which belong to a mixed NYF-LCT family of pegmatites) and do not contain lithium mineralization.

The ALPP is known to contain several large sodalithic-type pegmatites (LCT pegmatites) that are currently being mined on a small scale, and which were previously mined for tantalite and gemstones. A number of these are currently also being explored for their lithium potential.

The sodalithic pegmatites are preferentially hosted in the paragneisses of the Molócuè Group which comprises metapelites and metapsammites with subordinate interlayered marble, calc-silicates, felsic and mafic rocks.

The Company's exploration focus will be on the definition and capture of large, previously unexplored or previously under-explored pegmatites of the sodalithic type, with an emphasis on definition of unmined, concealed, shallow extensions.

Potential targets have been identified through historical data, satellite imagery interpretation and exploration programmes will now be focused on systematic mapping, sampling, and if initial appraisal is encouraging, evaluation through drilling.

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#### **Cautionary Statements**

#### **Forward-looking statements**

This document may contain certain forward-looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond the company's control. Actual events or results may differ materially from the events or results expected or implied in any forward-looking statement.

The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward-looking statements will be or are likely to be fulfilled. Li3 undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this document (subject to securities exchange disclosure requirements).

The information in this document does not take into account the objectives, financial situation or particular needs of any person or organisation. Nothing contained in this document constitutes investment, legal, tax or other advice.

#### **Competent Person's Statement:**

The information in this announcement that relates to the geological descriptions of the Mozambique Licenses (Appendix 1) is based on information compiled by Michael Cronwright, a Competent Person who is a fellow of The Geological Society of South Africa and Pr. Sci. Nat. (Geological Sciences) registered with the South African Council for Natural Professions. Mr Cronwright is a Principal Consultant with CSA Global in South Africa. Mr Cronwright has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Cronwright consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Glossary of selected geological terms:**

**Amazonite and Tourmaline-bearing Pegmatite**: a sub-type of the LCT pegmatite family containing green feldspar (amazonite) and tourmaline.

**Potassic-Beryl-Pegmatite**: a sub-class of the LCT pegmatite family containing Be (as beryl) and Nb-Ta (as the "columbite-tantalite" mineral series).

**Potassic-REE-Pegmatite:** a sub-class of the NYF pegmatite family typically rich in metamict (non-crystalline) U, Th, and rare-earth-element (REE) bearing minerals.

**Sodalithic Pegmatite:** a sub-class of the LCT pegmatite family, typically containing Nb-Ta (as the "columbite-tantalite" mineral series), Be (as beryl) and Li (in a number of minerals, including spodumene or petalite) corresponding to the "Complex Type" of the Rare Element Class of the LCT family of pegmatites.



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### Appendix 1: JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	NA, no sampling conducted at this stage.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	NA, no sampling conducted at this stage.
	Aspects of the determination of mineralisation that are Material to the Public Report.	NA, no sampling conducted at this stage.
	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information	
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core	NA, no drilling conducted at this stage.

Criteria	JORC Code explanation	Commentary
	<i>is oriented and if so, by what method, etc).</i>	
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	NA, no drilling conducted at this stage.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	NA, no drilling conducted at this stage.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	NA, no drilling conducted at this stage.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	NA, no drilling conducted, nothing to log at this stage.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	NA, no drilling conducted, nothing to log at this stage.
	<i>The total length and percentage of the relevant intersections logged.</i>	NA, no drilling conducted, nothing to log at this stage.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	NA, no drilling conducted. No core to sample at this stage.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	

Criteria	JORC Code explanation	Commentary
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	NA, no drilling conducted, no sampling conducted at this stage.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	NA, no drilling conducted, no sampling conducted at this stage.
	Whether sample sizes are appropriate to the grain size of the material being sampled	NA, no drilling conducted, no sampling conducted at this stage.
<i>Quality of assay data and laboratory tests</i>	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	NA, no sampling conducted, nothing to assay at this stage.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	NA, no other tools have been used at this stage.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	NA, not necessary at this stage as no drilling or sampling has been undertaken.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	NA, not relevant at this stage.

Criteria	JORC Code explanation	Commentary
	The use of twinned holes.	
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	NA, not necessary at this stage.
	Discuss any adjustment to assay data.	NA, not relevant at this stage.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	
	<i>Specification of the grid system used.</i>	All co-ordinates are recorded in the WGS84 datum, UTM 37 South Zone, unless otherwise specified.
	<i>Quality and adequacy of topographic control</i>	NA, not relevant at this stage.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	NA, no data points at this stage.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	NA, not relevant at this stage.
	<i>Whether sample compositing has been applied.</i>	NA, not relevant at this stage.
<i>Orientation of data in relation to geological structure</i>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	NA, no sampling conducted at this stage.

Criteria	JORC Code explanation	Commentary
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	NA, no drilling conducted at this stage.
Sample security	The measures taken to ensure sample security.	NA, no sampling conducted at this stage.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	NA, not relevant at this stage. No site visit has been conducted.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Li3 through its 100% ownership of LithiumB, S.A, a Mozambique based company, hold the Licences.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	6 Licenses were lodged and registered with the Mozambique Ministry of Mineral Resources and Energy for the projects in this Announcement. 5 have been granted (over an area of 31,481 ha (314.8 km <sup>2</sup> )). and a further 1 is under application over a total area of 31,620 ha (31.62km <sup>2</sup> ) (see Appendix 2 for License details).
<i>Exploration done by other parties</i>	Acknowledgment and appraisal of exploration by other parties.	Artisanal and historic workings and deeper pits, identified from satellite imagery, have been developed over gem- bearing pegmatites. Historical accounts indicate limited shallow beryl, tantalite and rare-earth mineral mining has occurred

Criteria	JORC Code explanation	Commentary
		in some areas. No recent exploration has been conducted on the properties.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Potential Li-Ta-Cs (LCT) type pegmatites which may contain lithium mineralisation in the form of spodumene, petalite and/or lepidolite as well as NYF type of pegmatites. These pegmatites are associated with Pan-African granitoids that intruded the Mozambique Belt during the Pan-African Orogeny.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	No drill hole information at this stage.
	easting and northing of the drill hole collar	
	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	dip and azimuth of the hole	
	down hole length and interception depth	
	hole length.	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and	NA, not relevant at this stage.

Criteria	JORC Code explanation	Commentary
	<i>cut-off grades are usually Material and should be stated.</i>	
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not relevant at this stage.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	NA, no assumptions made at this stage.
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	NA, no drilling conducted at this stage.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and	NA, no significant discoveries are being reported. Maps of the satellite image interpretation have been included.
Balanced reporting	<i>appropriate sectional views.</i> <i>Where comprehensive</i> <i>reporting of all Exploration</i> <i>Results is not practicable,</i>	NA, no exploration results being reported at this stage.

Criteria	JORC Code explanation	Commentary
	representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Detailed interpretation of satellite imagery was used to determine old workings, exposed and sub-cropping pegmatites.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Li3 plan to carry out mapping and preliminary rock chip sampling to establish the presence of lithium bearing pegmatites and the nature of the artisanal workings. Follow- up systematic soil and rock chip sampling will be used to establish drill targets. RC and diamond drilling to confirm surface results and determined thickness and depth extent of mineralisation.

## Appendix 2: Mozambique Granted Licenses

	Licence No.	<b>Area</b> (ha)	Status
1.	9167 L	7,137 ha	Granted
2.	9190 L	3,840 ha	Granted
3.	9166 L	91 ha	Granted
4.	9168 L	2,743 ha	Granted
5.	9188 L	17,670 ha	Granted