



# FURTHER HIGH-GRADE LITHIUM INTERCEPT RETURNED AT LEI PROSPECT

# **Highlights**

- High grade lithium mineralisation success in Phase 2 diamond drill hole BYLDD003 at the Lei Prospect within LPM's Bynoe Project
- Assay results confirm a significant intersection of high-grade spodumene mineralisation, with BYLDD003 assays returning:
  - **28.3m @ 1.60% Li<sub>2</sub>O** from 264.7m
- + The hole further extends Lei's mineralised system approximately 50m deeper than previous intersections
- Pegmatite system remains open at depth, indicating a potentially considerable volume of mineralised pegmatite body down-dip
- + Follow-up Phase 2 diamond drilling will continue at Lei into late December
- + Assay results from the initial drill program at Perseverance anticipated early December

Lithium Plus Minerals Limited (ASX: LPM) (**Lithium Plus** or the **Company**) is pleased to provide an exploration update on Phase 2 diamond drilling at Lei Prospect, Bynoe.

#### Lei Prospect

First assay results received from the Phase 2 diamond drilling program, confirm mineralisation success from hole BYLDD003 (refer LPM ASX release dated 18 October 2022). The diamond hole was positioned to target 50m below BYLDD001 which intersected thick zones of spodumene mineralisation (refer LPM ASX release dated 18 October 2022). The assay results for BYLDD003 have confirmed the visual logging of significant spodumene mineralisation in the core with high-grade intersections returning:

- 28.3m @ 1.60% Li<sub>2</sub>O from 265m, including:
  - 7m @ 2.23% Li<sub>2</sub>O from 265m; and
  - 4m @ 2.00% Li<sub>2</sub>O from 282m

These results for hole BYLDD003 are the first received from a second phase of 6 diamond holes (for 2000m) that follow up and build on previously reported high grade spodumene from the preliminary phase of drilling (refer LPM ASX release dated 18 October 2022), which included:

- (BYLDD001) 28.7m @ 1.43% Li₂O from 196m (two main intervals over 38.5m);
- (BYLRC023) **24.0m** @ **1.18%** Li<sub>2</sub>O from 173m (two main intervals over 32.0m); and
- (BYLRC022) **14m @ 1.21% Li<sub>2</sub>O** from 151m



BYLDD003 extends the primary spodumene-bearing pegmatite body at Lei vertically to a depth of approximately 250m. The high-grade mineralised pegmatite remains open at depth.

## Commenting on the ongoing drilling program, Executive Chairman, Dr Bin Guo, said:

"Our ongoing diamond drilling at the Lei Prospect continues to deliver high-grade intersections in what is shaping up to be a significant regional lithium discovery. It is particularly exciting to observe grades at Lei continuing to improve at depth and we eagerly await further results as we continue to unearth the full scale of this mineralised structure. Our aggressive exploration program targeting extensions of the current known high-grade mineralisation will continue into late December".

# **Next Steps**

The third completed diamond hole is part of an ongoing 2,000m diamond drilling program at Lei (refer LPM ASX release dated 15 June 2022) aimed at targeting further definition of the lithium bearing pegmatite. The drill program is anticipated to progress through the remainder of November and into mid December 2022.

An initial RC drilling program was completed at the Perseverance Prospect in November (refer LPM ASX release dated 8 November 2022). Assay results from the 8 RC holes for 1,137m are expected to be returned in early December.



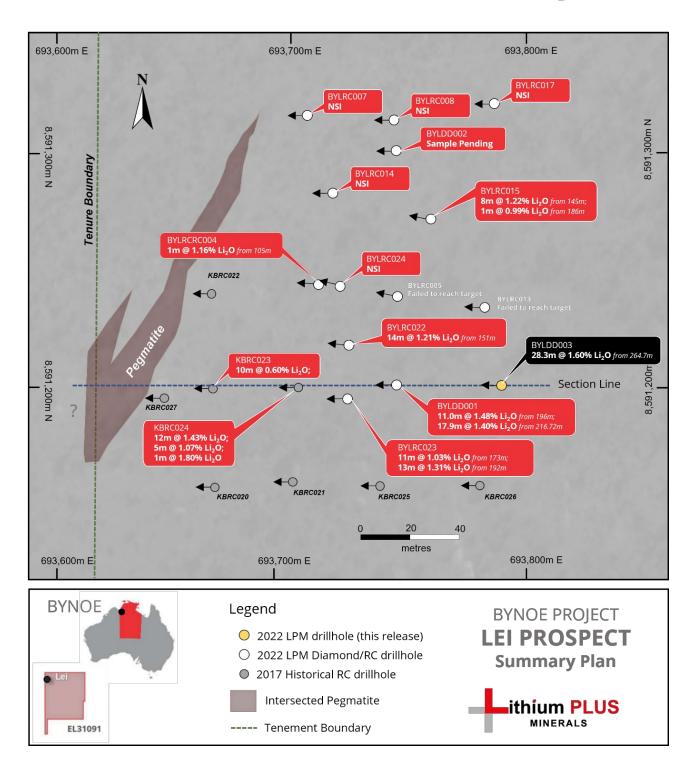


Figure 1: Drillhole locations at Lei Prospect, Bynoe



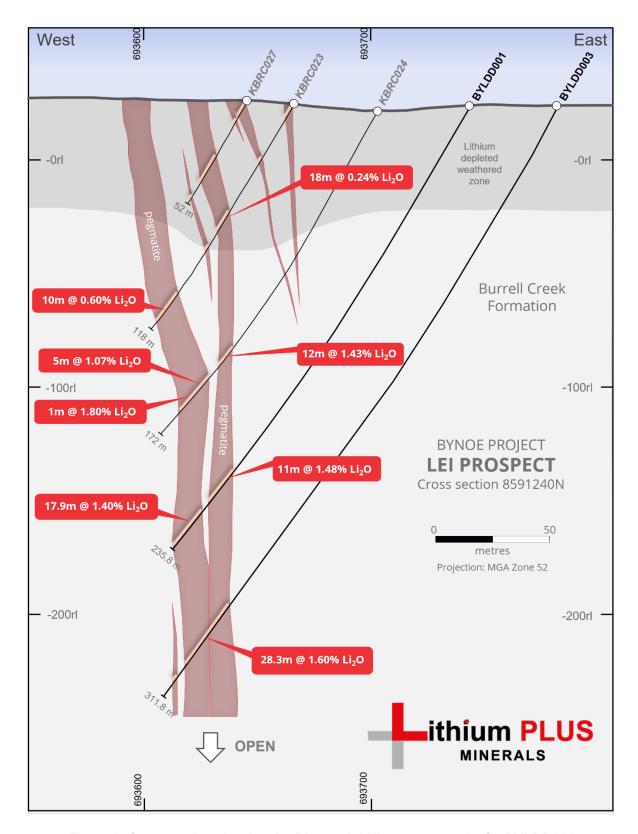


Figure 2: Cross section showing the Diamond drilling assay results for BYLDD003



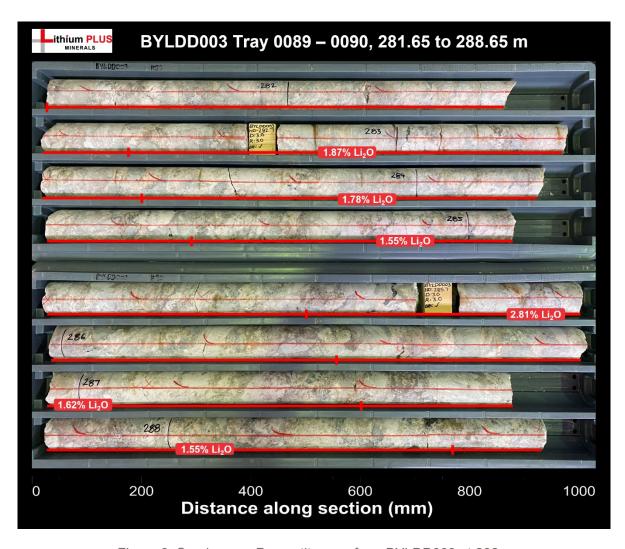


Figure 3: Spodumene Pegmatite core from BYLDD003 at 282m

Table 1: Lithium Plus Minerals 2022 Lei drill hole location

Hole ID	Collar Co-ordinates GDA94 MGA Zone 52		Survey Data		Pegmatite Intercepts					
	Easting	Northing	RL (m)	Azi (°)	Dip (°)	Depth (m)	From	То	Interval (m)	Est True Width (m)
BYLDD003	693784	8591200		270	-60	311.8	263.7	294.7	31.0	20.15
							302.7	305.7	3.0	1.95

Table 2: Summary of Lei drill hole data and received assay results

Hole ID	Collar Co-ordina Zone	Significant Mineralised Pegmatite					
	Easting	Northing		From (m)	To (m)	Interval (m)	Li2O (%)
BYLDD003	693784	8591200		264.7	293.0	28.3	1.60

(0.5% Li<sub>2</sub>O lower cut-off, no upper cut-off and maximum internal waste of 2.0 metres)



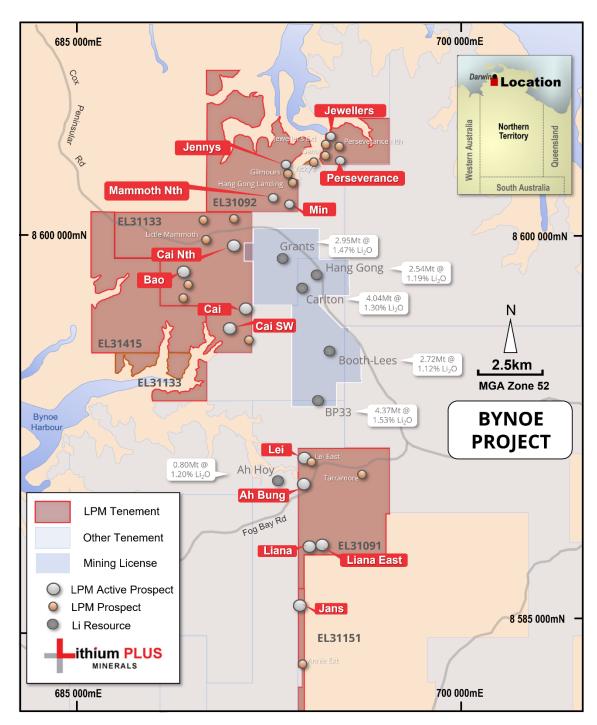


Figure 4: Bynoe Project Location map

The information in this release that relates to Exploration Results for the Bynoe Lithium Project is based on, and fairly represents, information and supporting documentation prepared by Dr Bryce Healy, Exploration Manager of Lithium Plus Minerals Ltd. Dr Healy is a Member of the Australasian Institute of Mining and Metallurgy and he has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been undertaken 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". Dr Healy consents to the inclusion in this release of the matters based on the information in the form and context in which they appear.



This announcement has been authorised for release by the Board of Lithium Plus.

#### Contact:

Dr Bin Guo

**Executive Chairman** 

+61 02 8029 0666

bquo@lithiumplus.com.au

Mr Simon Kidston

**Non-Executive Director** 

+61 414 785 009

skidston@lithiumplus.com.au

#### About Lithium Plus Minerals

Lithium Plus Minerals Limited (ASX: LPM) is an Australian Lithium exploration company with 21 tenements in the Northern Territory grouped into the following projects:

#### **Bynoe Lithium Project**

Situated on the Cox Peninsula, 45 km south of Darwin, on the northern end of the Litchfield Pegmatite Belt, with 11 granted tenements covering 297 km². Geologically centred around the Bynoe Pegmatite Field, the tenements share a border with Core Lithium's Finniss mine development. Significant lithium mineralisation was discovered at Lei in 2017 within the northnortheast trending spodumene bearing pegmatites. Current drill ready targets are Lei, SW Cai, Cai and Perseverance.

#### Wingate Lithium Project

Located 150km south of Darwin. this single tenement (EL31132) covers the Wingate Mountains Pegmatite District, the southern part of the Litchfield Pegmatite Belt. It contains the known presence of pegmatites with little exploration and minor historical production of tin. Historical gold workings (Fletcher's Gully) are present.

#### **Arunta Lithium Projects**

#### Barrow Creek

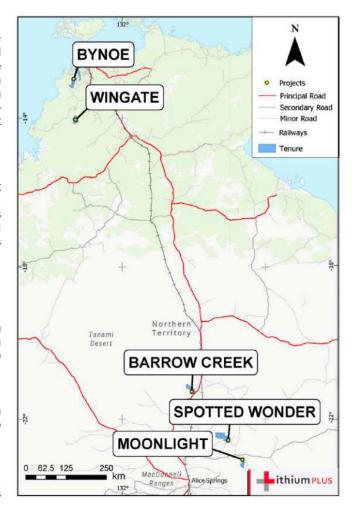
Located in the Northern Arunta pegmatite province, 300km north of Alice Springs. Historic tin and tantalum production and the presence of spodumene in nearby Anningie Pegmatite field suggest lithium potential.

## Spotted Wonder

Located approx. 200km north-north-east of Alice Springs with proven lithium mineralisation, with amblygonite present in the Delmore Pegmatite.

### Moonlight

Located within the Harts Range Pegmatite Field, approx. 200km north-east of Alice Springs. Presence of pegmatites containing elbaite, indicative of lithium enrichment.





JORC, 2012 Edition: Table 1 report

# **Section 1 Sampling Techniques and Data**

This Table 1 refers to current 2022 Lithium Plus Minerals (LPM) drilling currently underway at the Lei Prospect, Bynoe Project.

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done, this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The current diamond drilling reported in this release at the Lei Prospect, Bynoe relates to drill hole BYLDD003 completed in November 2022 using diamond drilling with HQ core. The diamond hole was drilled to a depth of ~311.8m.</li> <li>Diamond drilling</li> <li>Diamond hole BYLDD003 was completed using diamond drilling with HQ core from surface.</li> <li>The drillhole were sampled on intervals based on mineralisation potential, lithology contacts and structure.</li> <li>Larger diameter HQ core had preference as a sample technique due to the coarse nature of mineralogy in the target lithology.</li> <li>Drill core was collected directly into core trays, marked with hole orientation, and subsequently marked with downhole lines and metre marks. The core was transported directly to the LPM logging facility in Darwin for geological logging and sampling.</li> <li>Sampling adopted a recommended maximum of 1 metre of core length to maintain representivity and based on observed sample heterogeneity with sample size down to 0.7m to match geological contacts. 1m sampling continued into the barren wall zone of the pegmatite and then for 3m into the immediate metasedimentary wall-rock.</li> <li>The core was cut in half by a diamond core saw with care taken to sample the same side of core for a representative sample.</li> </ul>
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Diamond coring was drilled by drilling contractor DDH1 Drilling using a Sandvik truck mounted Drill Rig. Core diameter is HQ (63.5mm) standard tube. Core is oriented with a Reflex Gyro-sprint IQ tool. The oriented core line is recorded for length and confidence and is never sampled, preserving the line for future use.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.     Measures taken to maximise sample recovery and ensure representative nature of the samples.     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.	<ul> <li>Diamond drill recovery is recorded run by run reconciling against driller's depth blocks noting depth, core drilled, and core recovered.</li> <li>Geological logging currently documents core recoveries within 95% of expected within the fresh zone and mineralised pegmatite interval with nothing recorded concerning the amount and consistency of material recovered from the drilling in the zone of interest.</li> <li>Noted poor recoveries are impacted by excessive water ingress, particularly in the weathered zone.</li> </ul>
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.	<ul> <li>Geological logging identifying the primary lithologies, mineralogy and core run recovery has been undertaken by suitably qualified geologists along the entire length of the hole.</li> <li>All holes have been logged for mineralogy, veining, alteration, weathering, structure, and other sample features as appropriate to the style of deposit. Logging has been</li> </ul>



Criteria	JORC Code explanation	Commentary
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.      The total length and percentage of the relevant intersections logged.	undertaken at site and at the Company's core logging facility.  Pegmatite intervals have been checked for UV light-response for spodumene identification and to provide qualitative information as part for the logging process.  Logging is stored in MX Deposit Database software which utilises validated logging lists and data entry rules.  All core trays have been photographed in natural light in both a wet and dry state.  The level of detailed logging is aimed at supporting detailed geological modelling considered appropriate for future potential Resource estimation and metallurgical studies.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.  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.  Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>The pegmatite intervals (and up to 3m of the immediate wall rock) within the drillhole were sampled on intervals based on mineralisation potential, lithology contacts and structure.</li> <li>Sampling length ranged up to 1.0 metre of core length, appropriate to geology and mineralogy.</li> <li>Sampling is ½ cut core by diamond core saw by experienced LPM personnel at offsite core cutting facilities at Spring Hill. ½ HQ core size is considered by LPM to be the minimum acceptable standard for representivity of pegmatite samples.</li> <li>Sampled core was transported to North Australian Laboratories (NAL) in Pine Creek for sample analysis.</li> <li>½ core is retained in plastic core trays at the LPM core facility for future work and reference.</li> <li>Sample preparation and associated QA/QC protocol has not been undertaken and will be reported at the appropriate time.</li> </ul>
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  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.  Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Sample analysis for DDH samples were undertaken at North Australian Laboratories, Pine Creek, NT.</li> <li>A 0.3 g sub-sample of the pulp is digested in a standard 4 acid mixture and analysed via ICP-MS and ICP-OES methods for the following elements: Li, Cs, Rb, Sr, Nb, Sn, Ta, U, As, K, P, S and Fe. The lower and upper detection range for Li by this method are 1 ppm and 5000 ppm respectively.</li> <li>During the drilling program a 3000 ppm Li trigger was set to process that sample via a fusion method. The fusion method was - a 0.3 g sub-sample is fused with 1g of Sodium Peroxide Fusion flux and then digested in 10% hydrochloric acid. ICP-OES is used for the following elements: Li, P and Fe. The lower and upper detection range for Li by this method are 10 ppm and 20,000 ppm respectively.</li> <li>The laboratory has a regime of control subsamples.</li> <li>NAL utilise standard internal quality control measures including the use of Certified Lithium Standards (approx. 1 in 4) and duplicates/repeats (approx 1 in 6).</li> <li>Approximate LPM-implemented quality control procedures include:</li> <li>One in 15 certified Lithium ore standards were used for this drilling.</li> <li>One in 20 lab coarse crush duplicates were used for this drilling program.</li> <li>Blanks were inserted at the start and end of the pegmatite interval for this drilling.</li> <li>QAQC of drilling data</li> <li>LPM used 3 standards based on Bynoe Region pegmatites between 2300ppm and 10200ppm Li.</li> <li>LPM used 1 blank based on granite chips between 38 ppm</li> </ul>



Criteria	JORC Code explanation	Commentary
		No umpire samples
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data.	<ul> <li>Detailed logging of the core is entered into MX Deposit Geochemical Database software.</li> <li>MX Deposit utilises validated logging lists and data entry rules.</li> <li>The logging is routinely checked and manually verified within MX deposit against core photos and recovery by the exploration manager and the site procedures are routinely verified by the Site manager.</li> <li>Audits of the logging will be periodically done by external consultants.</li> <li>Metallic lithium percent was multiplied by a factor of 2.153/10000 to report Li ppm as Li<sub>2</sub>O%.</li> </ul>
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.     Specification of the grid system used.     Quality and adequacy of topographic control.	Drill Collar  The drill collar location has been recorded in the field using a hand-held global positioning system (GPS).  The grid system is MGA_GDA94, zone 52 for easting, northing and RL.  Locational accuracy is in the order of ±10 m in X-Y and ±15 m in rL (Z). These are yet to be surveyed by DGPS with more accuracy (to +/- 1m).  Drill hole direction and downhole surveys  Down hole surveys are routinely measured at 30m intervals with a Reflex's Gyro-Sprint IQ downhole survey tool.
Data spacing and distribution	Data spacing for reporting of Exploration Results.     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.     Whether sample compositing has been applied.	Drill spacing is determined by the stage of exploration of the prospect.  The current hole positioning has been aimed at 25m to 40m spacing along strike and vertical at a distance suitable to define structural trends and establish continuity of the pegmatite body.  Mineralised intervals reported are based on a maximum of one metre sample interval, with local intervals down to 0.7m
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.      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.	The reported drillhole has been oriented to intersect the structure/geology containing or controlling the pegmatite dyke at a high angle based on projections from historical and recent drilling and geological modelling.  Generally, the orientation is appropriate. No sampling bias is considered to have been introduced given the observed mineralogy within the pegmatite body. Because of the dip of the hole, drill intersections are apparent thicknesses and overall geological context is needed to estimate true thicknesses.
Sample security	The measures taken to ensure sample security.	Drill core samples for assay is collected by LPM personnel from site and transported to the core logging facility in Darwin daily. The logging facility is within a secure industrial premises, within a gated and fenced complex.     The samples are logged in detail and processed for sampling prior to be transported off site by LPM personnel to core cutting facilities and then analytical laboratory for analysis.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No review or audit has been conducted on the current drilling.



# **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The Bynoe project is centered around 15 km south of Darwin (at 12°40'S latitude, 130° 45'W longitude). The drilling reported here took place at the Lei prospect (EL 31091).</li> <li>Lithium Plus Minerals Ltd are the registered holders of 22 EL's (see Table 2.1).</li> <li>The tenements are in good standing with the NT DPIR Title Division.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous exploration of pegmatite hosted mineralisation has occurred in the Bynoe region predominantly through historical small-scale workings targeting Sn ± Ta and through regional recent RC drilling programs by Core Exploration and Liontown Resources. Within Lithium Plus's target areas only historical workings and sparsely selected rock chip samples (pegmatite + host rock) have been previously undertaken.</li> <li>First pass drilling on the mentioned prospects was conducted by Kingston Resources under the current tenure in 2017.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Tenements listed above form part of LPM's Bynoe Project which is in the Bynoe Pegmatite Field (NTGS Report 16).</li> <li>The Bynoe pegmatite field extends for some 70km in length and extending up to 15km in width.</li> <li>The pegmatites occur as clusters, in groups or a single body hosted within the metasedimentary rocks (turbiditic) of the Burrell Creek Formation and Welltree Metamorphics proximal to the Two Sisters Granite (ca 1850). The NTGS have interpreted the pegmatite occurrences to have evolved from the S-type Two Sisters Granite giving an age of ~1850 Ma.</li> <li>Individual pegmatites range from narrow metre-scale veins to broad lozenge-shaped bodies several tens of meters in width and up to 500m in length, and generally conform to the regional schistosity (structural fabric).</li> <li>The Bynoe pegmatites are characteristically 'LCT' type (Lithium-caesium-tantalum). It has been reported many of the pegmatite occurrences exhibit highly weathered clay-quartz saprolite surface expressions to significant depth. Weathering has likely stripped the pegmatite of the key lithium mineral spodumene (and possibly Tantalum) requiring deeper drilling to test for lithium grades.</li> <li>In drill core, the fresh pegmatite is composed of extremely coarse spodumene (20–30%), quartz, albite, microcline and muscovite (in decreasing order of abundance), along with accessory amblygonite, apatite, cassiterite, ilmenite, rutile, and rare columbite, tantalite, tourmaline (elbaite), fluorite, topaz and beryl (NTGS, 2017).</li> </ul>
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 drillholes:     easting and northing of the drillhole collar     elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar     dip and azimuth of the hole     downhole length and interception depth	Table 1 for drill hole information     No drilling or material assay information has been excluded.



Criteria	JORC Code explanation	Commentary
	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	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Any sample compositing reported here is calculated via length weighted averages of the 0.7 to 1 m assays. Length weighted averages are acceptable method because the density of the rock (pegmatite) is constant.</li> <li>0.5% Li<sub>2</sub>O was used as lower cut off grades for compositing and reporting intersections with allowance for including up to 2m of consecutive drill material that has assayed below cut-off grade (internal dilution).</li> <li>There has been no top-cut to high grade with all 1m samples below 3.00% Li<sub>2</sub>O</li> <li>No metal equivalent values have been used or reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.  If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	<ul> <li>The azimuth and dip data for the current hole is presented in Table 2. The hole has been drilled, in general, at an azimuth toward ~270° angles approximating 60° dip on the interpretation of north-northeast trending, vertical to steeply east-dipping pegmatite body.</li> <li>Estimated true widths are reported in Table 1 and are estimated to be around 60 to 70% of downhole width.</li> </ul>
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 drillhole collar locations and appropriate sectional views.	See Figures 1 and 2.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All current exploration results have been reported.
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; 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.	Significant drilling exploration programs and Deep Ground Penetrating Radar (DGPR) surveys have been undertaken at the Lei Prospect by Kingston Resources in 2017. Much of this historical data has been recovered, validated to the extent that it can, and accessed for use in development of the preliminary geological model for the Lei Mineralisation and current exploration program design.
Further work	The nature and scale of planned further work (e.g. 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.	Lithium Plus Minerals is conducting additional DD drilling at its Lei Prospect to evaluate the down-plunge extent of the pegmatite. Refer main body of the report.