

**ASX Announcement** | 23 June 2023

## **Drilling at Scotty Lithium Project Shows Potential for Sedimentary Basin**

### **Highlights:**

- Drilling program has successfully been completed to confirm the presence of significant depths of clays within an implied 3.6km<sup>2</sup> area sedimentary basin at Loyal Lithium's 100% owned Scotty Lithium Project.
- The sedimentary basin extends from surface to a consistent depth of ≈165m along a 3.8 km strike length, tested by the completed drilling program.
- The sedimentary basin has strong surface lithium-boron soils assay results<sup>2</sup> and just 1km west of Nevada Lithium's (CSE: NVHL) 2022 drilling, which confirmed 2 layers of lithium mineralisation<sup>3,4,5</sup>.
- Drill core samples have been submitted for assaying with QA/QC results expected in August 2023.
- Positive assay results could result in a maiden lithium JORC mineral resource estimate for Loyal Lithium and initiate a scoping study for the project.
- The 5.7 km long western basin edge on Loyal Lithium's claims (implied from magnetotellurics<sup>1</sup>) consists of alluvial fan rocks that may accommodate mining/processing infrastructure and enable access to the basin for a traditional and relatively low-cost surface mining solution.
- Nevada Lithium recently produced a sample quantity of battery grade lithium carbonate<sup>6</sup> from the contiguous sedimentary basin drill core of the Bonnie Claire Project where drilling has found lithium only 1 km to the east of LLI's claims<sup>3,4,5</sup>.
- Scotty Lithium is located 40km north of the mining town of Beatty, 220km from Los Vegas and 330km from Tesla Nevada Gigacity with existing all-weather roads and power infrastructure within close proximity.

Loyal Lithium Limited (**ASX: LLI**) (**Loyal** or the **Company**) is pleased to announce that the drilling program at the Company's 100% owned Scotty Lithium Project in Nevada, USA, is complete and all drill holes have intersected large intervals of sedimentary clays from surface to a depth of ≈165m, confirming the MT-implied sediment basin.

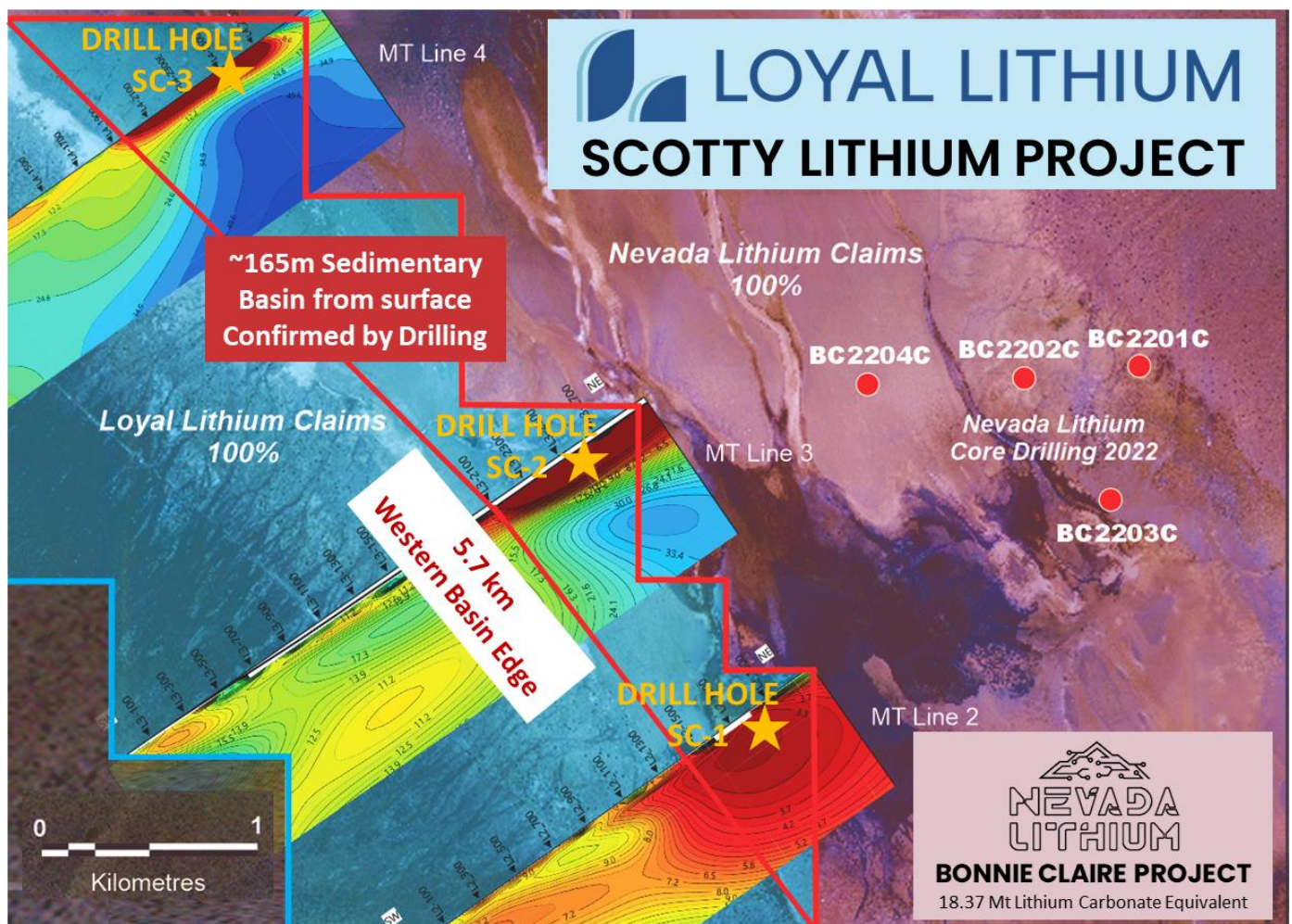
The implied 3.6km<sup>2</sup> sedimentary basin is now confirmed to extend from surface to a consistent depth of ≈165m. If mineralised, the sedimentary basin shows potential for a significant lithium resource. The sedimentary basin is beneath strong lithium-boron soils assay results<sup>2</sup> and is just 1km west of Nevada Lithium's 2022 drilling, which confirmed two layers of lithium mineralisation<sup>3</sup>.

The sonic drill rig has performed well, with high-quality samples sent for assaying. The Company anticipates that the drilling samples, sampling procedures, and assaying techniques will allow for the estimation of a maiden JORC lithium resource, subject to assay results.

**Loyal Lithium's Managing Director, Mr Adam Ritchie, commented:**

*"We are in a fantastic position at Scotty Lithium Project with the QA/QC assay results being the final input before potentially calling a sizable maiden lithium resource for the company. The location and geometry of the sedimentary basin is suggesting that a traditional low-cost surface mining solution is possible."*

*"We look forward to receiving and subsequently announcing our assay results at the Scotty Lithium Project."*



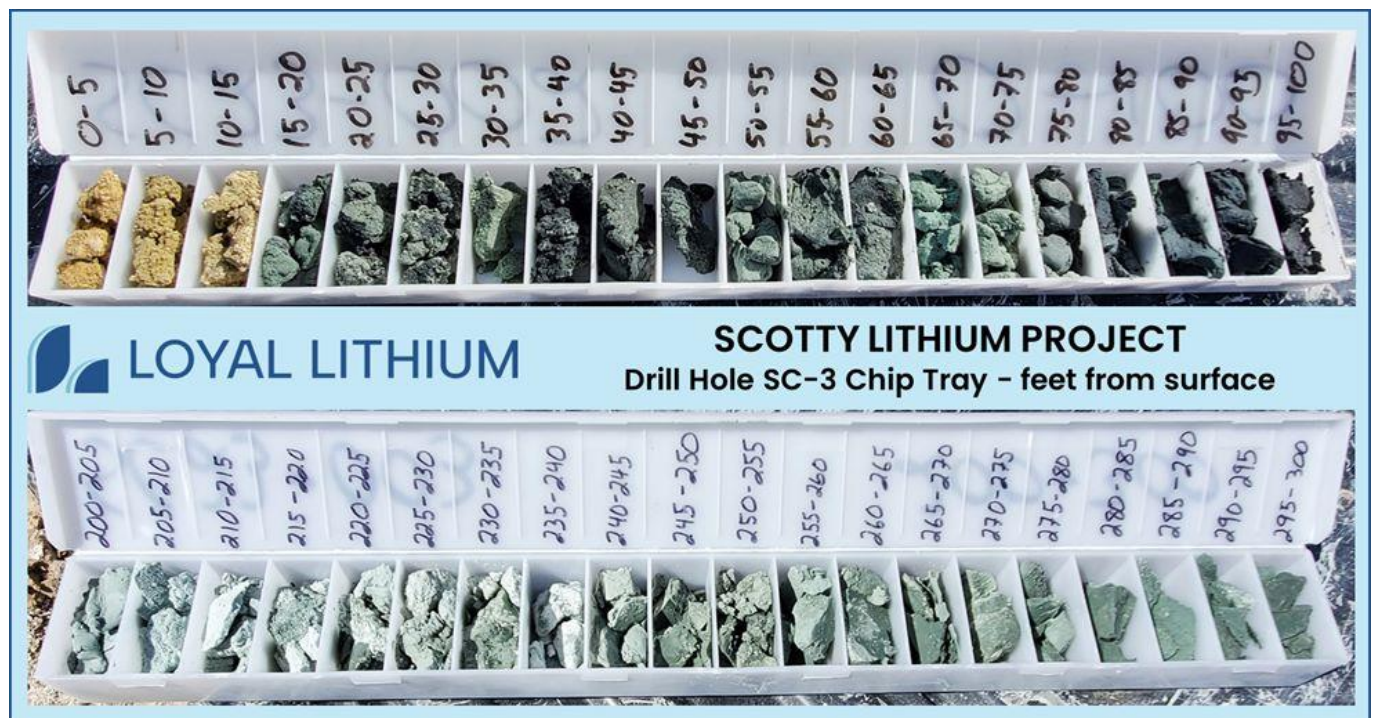
**Figure 1: Scotty Lithium Target 2 Sedimentary Basin – MT traverses projected to the horizontal**



The recent drilling program was undertaken adjacent to and to the west of Nevada Lithium's 2022 drilling<sup>4</sup> as shown in figure 2. The drill holes targeted MT anomalies suggesting conductive sedimentary basin is present at significant depths, analogous to the geology hosting lithium mineralisation adjacent to the east of LLI's claims. All drill holes have intersected  $\approx 165$  metres vertical depth of clay sediments from surface on Loyal Lithium's claims.

Samples were taken at every five foot (1.524m) interval, and have been delivered to the laboratory near Reno, Nevada for analysis. A comprehensive QA/QC program has been implemented which will be described once drilling assay results are announced.

Procedurally, this drill program is planned to a standard suitable for a JORC Competent Person to produce a mineral resource estimate, dependant on the lithium and boron assay results.



**Figure 3: Representative drill sample in chip trays taken every 5 feet (1.524 metres) from SC-3**

All drill holes (SC23-001, SC23-002 and SC23-003) intersected sedimentary clays to virtually the same depths on average  $\sim 541$ ft (165m), suggesting that the basin and basement contact is sub-horizontal and not shallowing west and that the basin's western edge is part of a horst and graben structure.

*Note: Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.*

## EGM Update

Loyal Lithium's Board of Directors has resolved to withdraw Resolution 4 from the upcoming EGM scheduled for the 26<sup>th</sup> June 2023.

*This announcement has been authorised for release by Loyal Lithium's Board of Directors*

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## About Loyal Lithium

Loyal Lithium Limited (ASX: LLI) is a well-structured listed resource exploration company with projects in Tier 1 North American mining jurisdictions in Nevada, USA and the James Bay Lithium District in Quebec, Canada. Through the efficient exploration of its projects, the Company aims to delineate JORC compliant resources.

### Future Performance

*This announcement may contain certain forward-looking statements and opinion forward-looking statements, including projections, forecasts and estimates, are provided as a general guide only and should not be relied on as an indication or guarantee of future performance and involve known and unknown risks, uncertainties, assumptions, contingencies and other important factors, many of which are outside the control of the Company and which are subject to change without notice and could cause the actual results, performance or achievements of the Company to be materially different from the future results, performance or achievements expressed or implied by such statements. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. Nothing contained in this announcement, nor any information made available to you is, or shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of Loyal Lithium Ltd.*

### Competent Person Statement

*The information in this announcement that relates to Exploration Results and Targets, is based, and fairly reflects, information compiled by Mr Darren Allingham, who is the Company's geologist. Mr Allingham is a Fellow of the Australian Institute of Geoscientists. Mr Allingham has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results and Mineral Resources (JORC Code). Mr Allingham consents to the inclusion in the announcement of the matters based on the information in the form and context in which it appears.*

## References

- <sup>1</sup> ASX Announcement LLI): MT Traverses Implies Sedimentary Target as Drill Mobilisation Commences at 100% owned Scotty Lithium Project, Nevada, USA 20 March 2023
- <sup>2</sup> ASX Announcement MMG (LLI): Strong Soil Assay Results Define Targets at the Scotty Lithium Project, Nevada USA 21st September 2022
- <sup>3</sup> Iconic Intercepts Lithium Grades up to 5570ppm at Bonnie Claire Project Vancouver, British Columbia – (Newsfile Corp. – September 29, 2022) – Iconic Minerals Ltd. (TSXV: ICM) (OTCQB: BVTEF)
- <sup>4</sup> Iconic Minerals Receives Additional Drilling Assays for Bonnie Claire Lithium Project Vancouver, British Columbia – (Newsfile Corp. – December 20, 2022) – Iconic Minerals Ltd. (TSXV: ICM) (OTCQB: BVTEF)
- <sup>5</sup> Iconic Finds Strong Correlation Between Drill Holes at Bonnie Claire Lithium Project Vancouver, British Columbia – (Newsfile Corp. – December 07, 2022) – Iconic Minerals Ltd. (TSXV: ICM) (OTCQB: BVTEF)

## Appendix 1: Drill Hole Details

<b>Drill Hole</b>	<b>X</b>	<b>Y</b>	<b>RL</b>	<b>depth m</b>	<b>dip</b>
SC23-001	496,790	4,113,870	1200	170.69	-90
SC23-002	496,150	4,115,100	1200	169.16	-90
SC23-003	494,498	4,116,845	1200	172.21	-90

Note: Coordinates in UTM\_NAD83\_zone 11 north. Drill hole diameter variable 4.75 inch



## JORC Code, 2012 Edition – Table 1 report template

### Section 1 Sampling Techniques and Data

(Criteria in this table apply to all preceding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li><i>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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<p>No sample assays are reported.</p> <p>Drilling was undertaken by a vertical hole sonic drill rig operated by Boart Longyear USA</p> <p>Sample was extracted consecutively into plastic bag tubes over down hole lengths every 5 feet (1.524m). Logging and sampling for assay were undertaken over each of these down hole intervals</p>
Logging	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p>Qualitative geological logging of all drill sample was undertaken on site, with small representative samples collected in sample trays from every 5 feet (1.524m) down hole. Samples lengths and chip trays were photographed</p> <p>Geological and sampling data was recorded on electronic tablets and downloaded to laptops with backups completed daily. Drill sample recoveries were recorded</p>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all cores taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>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.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>Samples were extracted parallel to the sample core stream, sliced by plastic knife, taken as a quarter of the sonic drill core. A second quarter core sample is taken at intervals selected by the geologist for umpire sample assaying</p> <p>Sample sizes are appropriate for the style of mineralisation in the form of potentially large volumes of playa lake sediment hosting lithium mineralisation</p>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<p>No assay results are reported</p> <p>Samples are being analysed by American Assay Laboratory: Basic Rock/Drill Prep Package (BRPP2KG). Samples ICP-AES Analysis of 27 Elements, Na2O2 Fusion, 0.5g Sample (IO-NF27)</p> <p>Blind lithium specific standards and blank sample were introduced into the sample stream</p> <p>The laboratory has appropriate lithium grade internal standards inserted into each batch of samples</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<p>No assay results are reported.</p> <p>Samples are being assayed at American Assay Laboratories, Sparks, Nevada with umpire samples, selected from intervals by the geologist, being sent to ALS Laboratory Reno, Nevada</p>
Location of data points	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-</i></li> </ul>	<p>Three drill hole collars were positioned by GPS on the playa lake. This is</p>

Criteria	JORC Code explanation	Commentary
	<p><i>hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<p>appropriate for the style of lithium mineralisation which is in the form of large sub-horizontal layers in playa lake clays</p>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<p>Drill holes SC23-001 and SC23-002 are 1.4km apart. Drill holes SC23-002 and SC23-003 are 2.4km apart.</p>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<p>Drill holes are drilled vertical, being appropriate for this style of sub-horizontal playa sedimentary basin stratigraphy with lithium mineralisation interpreted to be potentially present as evaporites and precipitates in clay sized sediment (illite) beds</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<p>Individual samples for assay were stored in large plastic bags on a truck tray and were delivered to the laboratory, managed by onsite geologists</p> <p>Remaining drill sample not submitted for assay is stored at a site on covered pallets with 24-hour security</p>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<p>No audit or reviews completed with the drill program results to be received.</p>



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	Loyal Lithium Ltd 100% owned through subsidiary NevLith LLC agreement with Playa Minerals: unpatented mining claims located in Sections 19 & 32, Township 8 south, Range 44 East; Section 04, 10 & 24, Township 9 South, Range 44 East; and Sections 06, 20, 29, 30, 31 & 32, Township 9 South, Range 45 East, Mount Diablo Meridian, Nye County, Nevada
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<p>Drilling completed by Nevada Minerals adjacent east of LLI's claims in the playa sedimentary basin</p> <p>No previous drilling has been undertaken on the targeted site on LLI's claims</p> <p>Historical MT data partially crossed LLI's claims by Iconic Minerals/ Nevada Lithium was used to confirm new MT data inversion interpretations</p>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	Miocene aged sub-horizontal playa lake clay and sandstones deposited into basin and range troughs with lithium compounds concentrated within horizontal stratigraphy, strata bound
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><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.</i></li> </ul> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	No exploration assay results reported, only interim qualitative geological logging results

Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</i></li> </ul>	No assays/mineralisation reported
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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 appropriate sectional views.</i></li> </ul>	Appropriate plan location map of drill holes planned in this campaign are included in this ASX announcement
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.</i></li> </ul>	All interim geological exploration drilling results are reported, with qualitative descriptions of geological logs that require finalization in order to place the assay results when received into context
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<p>Announced surface auger soils sample assays completed by LLI across claims</p> <p>Three traverses of MT Geophysics perpendicular to the playa boundary were completed by LLI, with inversion images produced. Historical MT geophysics traverses partially crossed LLI's claims, with inversion images examined.</p> <p>Core drilling completed a minimum of approximately 1km to the east of LLI's claims by Nevada Lithium</p>



Criteria	JORC Code explanation	Commentary
<i>Further work</i>	<ul style="list-style-type: none"><li><i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li><li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li></ul>	Given the encouraging results from LLI's auger soils program, MT geophysics program and drilling within 1km east of LLI's claims by Nevada Minerals the three drill holes completed in this campaign have tested a large sedimentary basin lithium target