

OUTSTANDING ROCK-CHIP ASSAYS UPGRADE RED MOUNTAIN PROJECT, USA

Rock-chip assays reveal high-grade lithium potential below surface



Key Highlights

- **36 rock-chip samples reveal the presence of high-grade lithium claystone mineralisation in outcropping and subcropping claystones at Red Mountain.**
- **Exceptional grades of up to 2,190ppm lithium.**
- **Trend of +500ppm lithium grades in rock-chip samples along Project's north-south strike.**
- **Lithium grades in many rock-chip samples exceed proximal soil grades, indicating excellent sub-surface potential.**
- **Maiden drilling campaign to be designed targeting strong lithium anomalies in the coming field season.**

Astute Metals NL (ASX: ASE) ("ASE", "Astute" or "the Company") is pleased to advise that a recent rock-chip sampling campaign has revealed outstanding rock chip assay results of up to 2,190ppm lithium from sampled claystone at the recently staked 100%-owned Red Mountain Lithium Project in Nevada, USA.

A total of 36 samples were taken at Red Mountain, targeting claystone and other outcropping to subcropping rock types to characterise the Project's potential for lithium mineralisation. Recently reported soil sampling results revealed a large-scale zone of anomalism stretching over 8km strike and up to 2.8km width³. The rock-chip results reported in this announcement demonstrate the presence of strongly mineralised claystones underlying this anomaly, with multiple samples grading above 500ppm lithium.

Based on the strength of the soil and rock-chip results, Astute is now focused on designing and permitting an initial drill campaign at the highly prospective Red Mountain Project to test key targets. The Company is aiming to have drillholes permitted by the end of the calendar year, with the intention of commencing drilling as soon as seasonal conditions allow following the Nevada winter.

Astute Executive Chairman, Tony Leibowitz, said:

"Our field work programs at Red Mountain continue to highlight the Project's exceptional prospectivity for claystone-hosted lithium mineralisation, with these rock-chip results indicating the presence of strongly mineralised claystones extending over a broad area. We're very much looking forward to getting scout drilling underway at Red Mountain as soon as weather permits to provide a more definitive test of this potential."

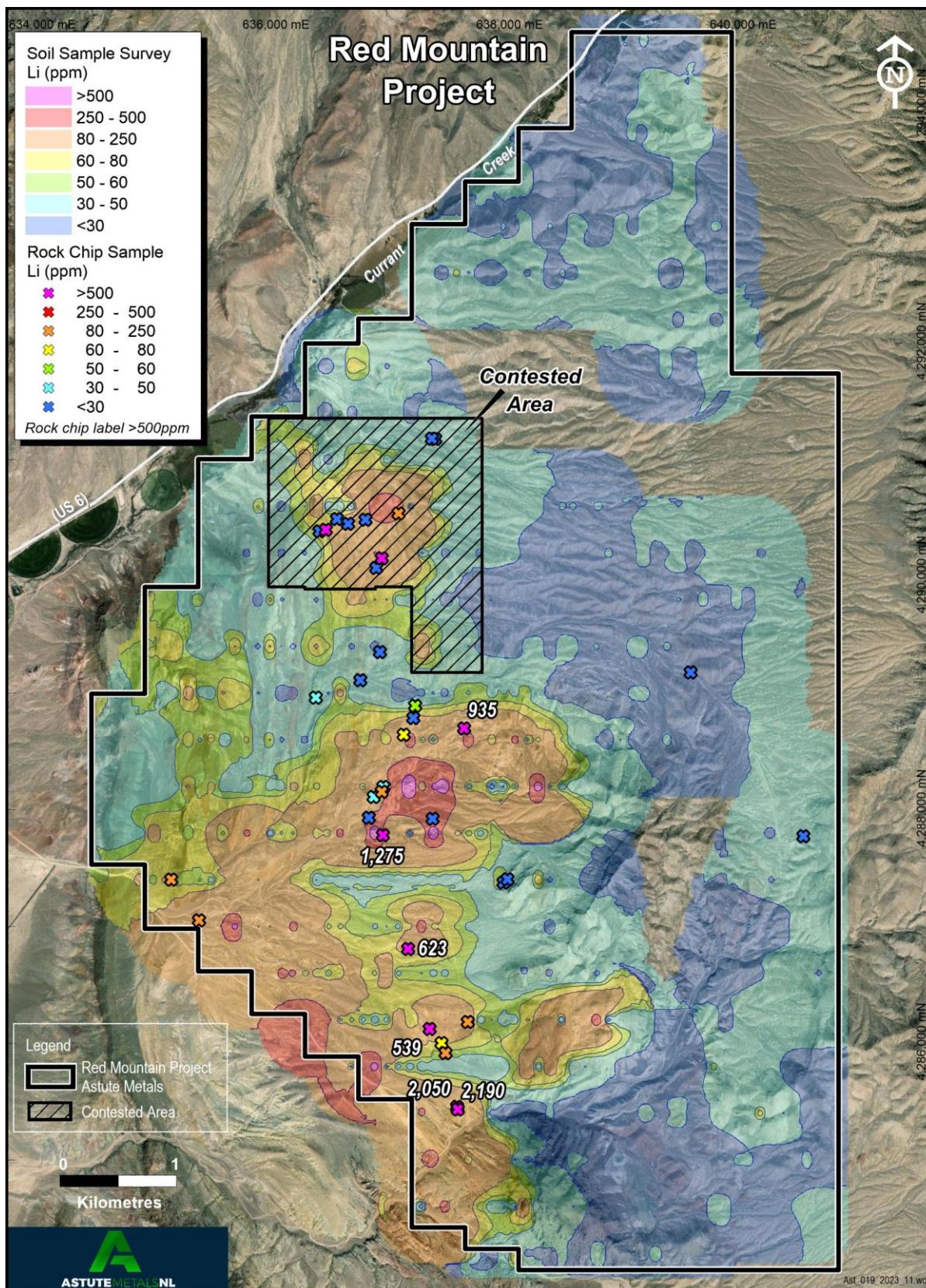
Background

Located in central eastern Nevada, the Red Mountain Project was staked in August 2023 following a desktop project generation exercise and subsequent on-ground reconnaissance conducted in May 2023. The project area has broad mapped tertiary lacustrine (lake) sedimentary rocks known locally as the Horse Camp Formation, and regionally as part of the Ts3.

Elsewhere in the state of Nevada, the Ts3 hosts large lithium deposits such as the 15.8Mt LCE (lithium carbonate equivalent) Tonopah Flats deposit¹ and the 9.79Mt LCE TLC Lithium Project².

After staking was completed, Astute completed an 819-point soil sampling campaign that revealed strong lithium anomalism in soils, with grades of up to 1,110ppm lithium and a coherent 50ppm+ anomaly that stretched over 8km strike and up to 2.8km width³.

Other attractive characteristics include outcropping claystone host-rocks and close proximity to infrastructure, including the Project being immediately adjacent to the Grand Army of the Republic Highway (Route 6), which links the regional cities of Ely with Tonopah, close to the Company's existing Polaris and Altair Projects.



Rock Chip Sampling Results

Following completion of the soil sampling campaign, the Company embarked on a rock-chip campaign at Red Mountain designed to test for lithium at strategic locations and across a range of outcropping and shallowly sub-cropping rock types. The results reported here include samples collected during initial reconnaissance sampling undertaken at the Red Mountain Project area in May 2023, prior to staking the claims.

The results of the rock chip sampling reveal the presence of strongly mineralised claystone, with 10 claystones grading on average 1,102ppm lithium, ranging from 132–2,190ppm lithium. As a relatively soft rock type, claystones at Red Mountain do not tend to outcrop, but are rather covered by 30cm or so of soil and decomposed claystone, which had to be removed prior to sampling. Other rock types that were sampled include limestone, various felsic volcanic rocks, breccias and undifferentiated sedimentary rocks, which typically yielded lower lithium grades than the claystones.

The recessive nature of the claystone means that more claystone may be present than is immediately apparent, with the harder rock types presenting as outcrop and the claystone being hidden by a shallow veneer of soil.

Next Steps

Together, the soil sampling and rock-chip sampling results from Red Mountain reveal a compelling target for exploration drill testing. The Company is now finalising its interpretation of all results and planning an initial scout drilling campaign to test the lithium soil anomalism in a number of strategic locations at the Project.

Once final hole designs have been completed, the Company will submit a Notice of Operations to the Nevada Bureau of Land Management (BLM) in order to permit the disturbance required for drilling. The Company expects to have permitting approved and a bond in place by the end of the calendar year, with a view to mobilising a drill rig to test the holes once seasonal conditions permit, towards the end of Q1 2024.

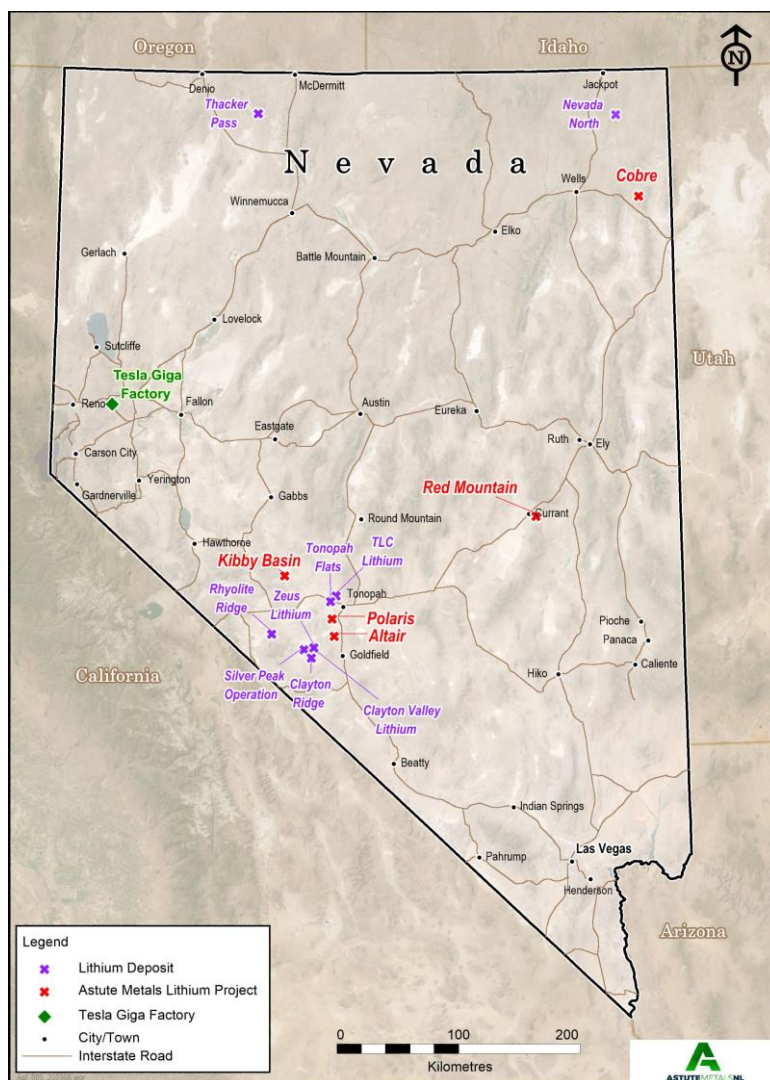


Figure 2. Location of Astute Nevada Lithium Projects and lithium deposits

OTCMKTS: ABML 26 February 2023 'Technical Report Summary For The Tonopah Flats Lithium Project, Esmeralda.'
1 TSX.V: LI 17 March 2023 'Tonopah Lithium Claims project NI 43-101 technical report – Preliminary Economic Assessment'
2 ASX: ASE 20 November 2023 'Large Lithium soil anomalies discovered at Red Mountain'

Authorisation

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

More Information

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Competent Persons

The information in this report that relates to Sampling Techniques and Data (Section 1) is based on information compiled by Mr Matthew Healy, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM Member number 303597). Mr Healy is a full-time employee of Astute Metals NL and is eligible to participate in a Loan Funded Share incentive plan of the Company. Mr Healy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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'. Mr Healy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Reporting of Exploration Results (Section 2) is based on information compiled by Mr Richard Newport, principal partner of Richard Newport & Associates – Consultant Geoscientists. Mr Newport is a member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person under the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Newport consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Section 1 – Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p>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.</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>Aspects of the determination of mineralisation that are Material to the Public Report.</p> <p>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.</p>	<p>Rock chip samples were taken from outcropping or shallowly subcropping rocks using a geopick.</p> <p>Claystone hosted lithium deposits are thought to form as a result of the weathering of lithium-bearing volcanic glass within tertiary-aged tuffaceous lacustrine sediments of the mapped Ts3 unit. Inputs of lithium from geothermal sources have also been proposed.</p>
Drilling techniques	<p>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 is oriented and if so, by what method, etc).</p>	Not applicable.
Drill sample recovery	<p>Method of recording and assessing core and chip sample recoveries and results assessed.</p> <p>Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p>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.</p>	Not applicable.
Logging	<p>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.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	Not applicable.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotarysplit, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p>	<p>Full samples were submitted to ALS Laboratories in Reno for preparation and analysis.</p>
Quality of assay data and laboratory tests	<p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p> <p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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.</p>	<p>Samples were analysed by method ME-MS41 which is an ICP-MS method employing an aqua-regia digest. Aqua-regia is not considered a 'total' digest for many elements however is considered fit for purpose for lithium and has been used extensively by other parties exploring for lithium claystone deposits in the USA.</p> <p>Assay quality was monitored using pulp blanks, as well as certified reference materials (CRMs) at a range of lithium grades. Pulp blank results indicated no material contamination of samples from sample preparation or during the analytical process. CRM results were all within 3 standard deviations from the certified value. No other accuracy related issues were identified.</p>
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Samples were assigned a unique sample identification number prior to sample despatch</p> <p>Lithium-mineralised claystone Certified Reference Materials (standards) and pulp blanks were inserted into the sample stream at regular intervals (at least 1:25 ratio) to monitor lab accuracy and potential contamination during analytical processes</p>
Location of data points	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>Sample locations were pre-determined by overlaying a grid and using hand-held GPS to navigate to points. Locations are reported in NAD83 UTM Zone 11. Expected site location accuracy is +/- 10m</p>

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	Not applicable
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	Based on open file mapping the Horse Camp Formation stratigraphy strikes approximately north-south and dips to the east. Observed dip measurements, which range from 23° to 70° are highly variable and are likely affected by faulting and slumping
Sample security	The measures taken to ensure sample security.	Samples taken from sampling site to external laboratory by Astute employees
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable

Section 2 – Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<p>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.</p> <p>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.</p>	<p>Red Mountain Claims (CRN001-556) are held in 100% Astute subsidiary Needles Holdings Inc. and all claims are located on Federal (BLM) Land</p> <p>Overlapping claims have been staked in the same area by a competitor staker. The Company has informed the Competitor that it must cease any further activities on the overlapping claims and that failure to comply would constitute trespass and be subject to corresponding legal action.</p> <p>The Company is confident that it has title to the area covered by the Red Mountain Claims because (1) the Red Mountain Claims were staked before the Overlapping Claims, (2) the Company is in actual possession of the Red Mountain Claims and has been diligently pursuing their development, and (3) the Red Mountain Claims are supported by the discovery of a valuable mineral deposit. The position the Company has taken is supported by relevant case law with cases listed in the footnotes at the end of the body of this ASX release.</p> <p>The Company has nonetheless identified a 'contested claims area' in Figure 1. While the Company maintains that it has title to this area, this area is considered the highest risk on the basis that the Competitor emplaced monument stakes ahead of the Company.</p>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No known lithium exploration conducted on the Red Mountain Project area by other explorers
Geology	Deposit type, geological setting and style of mineralisation.	<p>The principal target deposit style is claystone hosted lithium mineralisation. Claystone hosted lithium deposits are thought to form as a result of the weathering of lithium-bearing volcanic glass within tertiary-aged tuffaceous lacustrine sediments of the mapped Ts3 unit.</p> <p>Lacustrine environments formed as a result of extensional tectonic regime that produced 'basin and range' topography observed across the state of Nevada. Inputs of lithium from geothermal sources have also been proposed.</p>

Drill hole Information	<p>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:</p> <ul style="list-style-type: none"> ◦ 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. <p>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.</p>	Not applicable
Data aggregation methods	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	Not applicable

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>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').</p>	Not applicable
Diagrams	<p>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.</p>	Included in ASX announcement
Balanced reporting	<p>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.</p>	This release describes all relevant information
Other substantive exploration data	<p>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.</p>	This release describes all relevant information
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Results will be used to design exploration drill holes for permitting, and drill testing in the next field season

APPENDIX 2 – Rock-chip sample assays

Sample ID	East	North	Li (ppm)	Rock type
602084	636962	4288184	229	Calcareous sediment
602160	639607	4289207	1.7	Clast-supported polymictic breccia
602069	637247	4288922	58.1	Clayey sediment
602082	636975	4288226	37.2	Clayey sediment
602087	637508	4285945	181.5	Clayey sediment
602066	637106	4290568	132	Claystone
602071	636481	4290430	1145	Claystone
602076	636960	4290183	1900	Claystone
602079	637698	4286213	232	Claystone
602151	637606	4285484	2050	Claystone
602152	637613	4285464	2190	Claystone
602153	637371	4286150	539	Claystone
602154	637187	4286837	623	Claystone
602156	636971	4287814	1275	Claystone
602162	637668	4288728	935	Claystone
602157	636852	4287961	12.6	Karst-textured limestone
602067	636915	4290103	18.3	Limestone
602068	636947	4289381	6.6	Limestone
602070	637231	4288816	10.6	Limestone
602072	636427	4290415	4.6	Limestone
602073	636577	4290522	8.2	Limestone
602074	636671	4290481	7.6	Limestone
602083	636892	4288140	32.1	Limestone
602085	638005	4287407	16.6	Limestone or Dolomite
602155	637396	4287951	11.9	Limestone. Possible float
602161	640571	4287802	11.1	Lithic sandstone
602158	637419	4291207	3.8	Possible pyroclastic
602077	636397	4288992	42.9	Sediment
602080	637471	4286032	78.6	Sediment
602081	637147	4288674	71.3	Sediment
602086	638039	4287434	22.4	Sediment
602088	635395	4287082	238	Sediment - green
602075	636821	4290516	7.9	Sediment undifferentiated
602163	635158	4287432	159	Siltstone
602159	637389	4291210	3.8	Volcanic undifferentiated
602078	636777	4289141	15.2	Volcaniclastic