

## HIGH-GRADE ROCK CHIP ASSAYS EXTEND PROSPECTIVE LITHIUM HORIZON AT RED MOUNTAIN PROJECT, USA

Grades up to 4,150ppm Li identified along 1.4km trend north of recent discovery



### Key Highlights

- **81 rock-chip samples reveal the presence of high-grade lithium claystone mineralisation in outcropping and sub-cropping claystones at Red Mountain.**
- **North-south trend of high-grade samples extends the claystone mineralisation 1.4km north of hole RMRC002, expanding the prospective horizon at Red Mountain**
- **Exceptional grades of up to 4,150ppm lithium reported.**
- **20 samples return grades over 1,000ppm lithium indicating high-grade clays across the Project.**
- **Assay results for the remaining eight drill holes expected in two batches by the end of July.**

Astute Metals NL (ASX: ASE) (“ASE”, “Astute” or “the Company”) is pleased to advise that rock chip assay results from its 100%-owned Red Mountain Lithium Project in Nevada, USA have returned high-grade mineralisation of up to 4,150ppm Lithium, further enhancing the project’s exploration and discovery potential. Notable results returned up to 1.4km north of the recently reported discovery include:

- **4,150ppm Li, brown-green claystone sampled 490m north of RMRC002**
- **2,900ppm Li, brown claystone sampled 990m north of RMRC002**
- **2,550ppm Li, brown claystone sampled 1.40km north of RMRC002**

A total of 81 samples were collected and assayed, adding to Astute’s understanding of the prospective horizons at Red Mountain and complementing the initial drill results from its maiden drilling campaign, for which assays for eight holes remain pending. The rock chip assays are shown, along with previous results including the recently announced high-grade lithium discovery, in Figure 1.

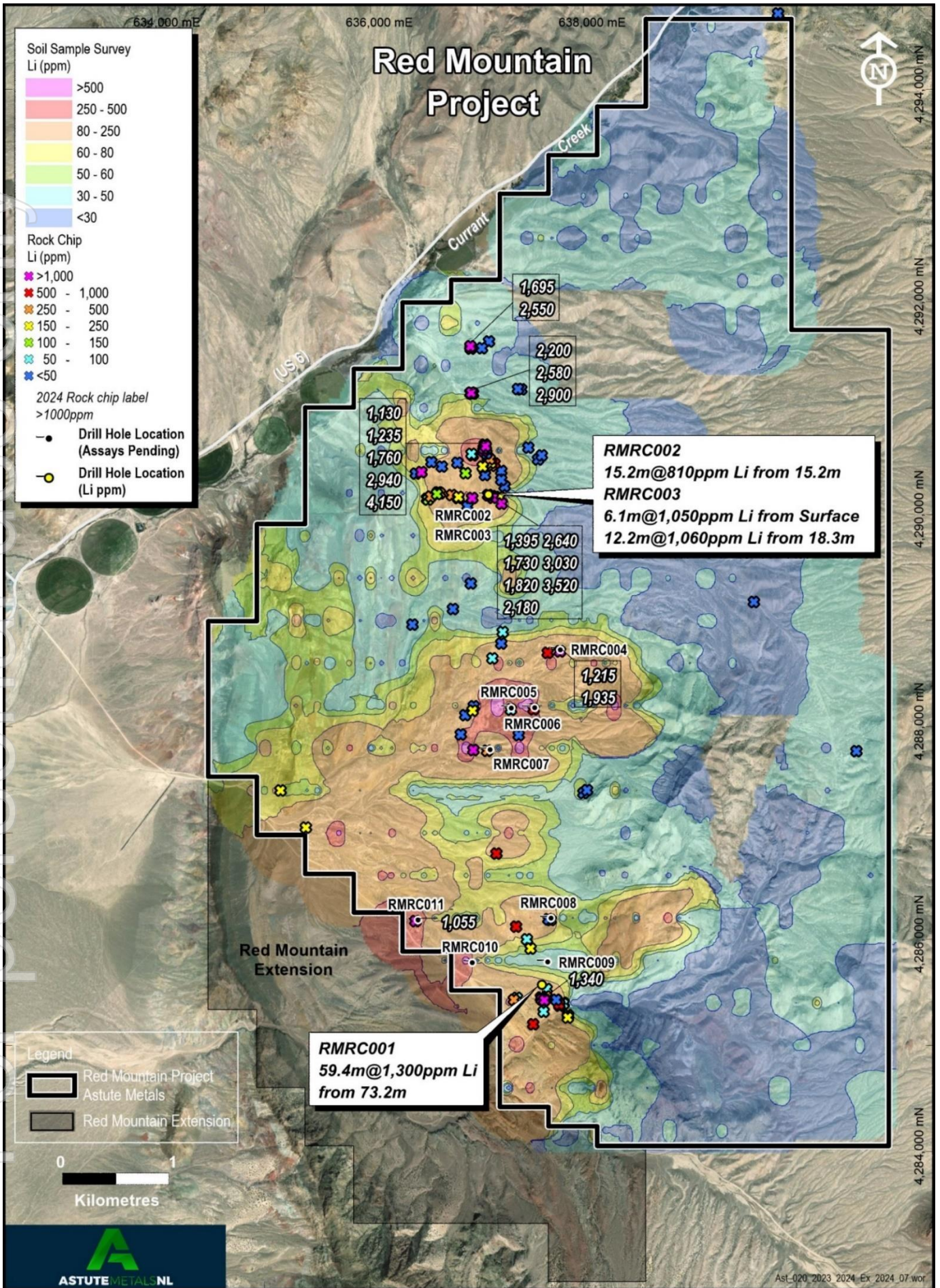
These results suggest that the targeted high-grade lithium horizon persists further north than previously interpreted, with a number of high-grade samples located along an approximate north-south trend stretching 1.4km north of the northernmost drill hole, RMRC002<sup>1</sup>. The extended zone will be tested by future drilling at the project.

### Astute Chairman, Tony Leibowitz, said:

*“Our exploration team continues to deliver exciting results, with these latest rock chip results returning exceptional lithium grades and further expanding the potential scale of the Red Mountain Project. The latest results come from an area up to 1.4km north of the discovery we announced recently on 18 June and provide further evidence of the scale and potential of this project.”*

*“We are eagerly awaiting the assays from eight drill holes along the initial 4.6km of strike tested by our recent drilling, with these new rock chip results further extending the prospective horizon to over 6km – adding a significant new area for drill testing later this year.”*

*“The latest results suggest that Red Mountain could be a very large and significant lithium discovery, and we are looking forward to systematically unlocking its full potential.”*



**Figure 1.** Rock chip and Drill-hole locations, intersections, and gridded soil sample geochemistry over aerial image.

## Background

Located in central-eastern Nevada (Figure 3), the Red Mountain Project was staked by Astute in August 2023.

The Project area has broad mapped tertiary lacustrine (lake) sedimentary rocks known locally as the Horse Camp Formation<sup>2</sup>. Elsewhere in the state of Nevada, equivalent rocks host large lithium deposits (see Figure 3) such as Lithium Americas' (NYSE: LAC) 16.1Mt LCE Thacker Pass Project<sup>3</sup>, American Battery Technology Corporation's (OTCMKTS: ABML) 15.8Mt LCE Tonopah Flats deposit<sup>4</sup> and American Lithium (TSX.V: LI) 9.79Mt LCE TLC Lithium Project<sup>5</sup>.

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+ lithium anomaly that extends over a strike length of 8km and is up to 2.8km wide<sup>2</sup> (Figure 1).

After completing 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 (see Figure 2).. The results of this initial rock chip sampling revealed the presence of strongly mineralised claystone, with 10 claystones grading on average 1,102ppm lithium, ranging from 132–2,190ppm lithium<sup>2</sup>

In May through June 2024 a maiden Reverse Circulation (RC) drilling campaign was completed at the Project, with initial results indicating the potential discovery of a significant lithium deposit<sup>1</sup>.

The assay results included the following high-grade drill intersections:

- RMRC001: 59.4m @ 1,300ppm Li / 0.69% Lithium Carbonate Equivalent<sup>6</sup> (LCE) from 73.2m
- RMRC002: 15.2m @ 810ppm Li / 0.43% LCE from 15.2m
- RMRC003: 6.1m @ 1,050ppm Li / 0.56% LCE from surface, and 12.2m @ 1,060ppm Li / 0.56% LCE from 18.3m

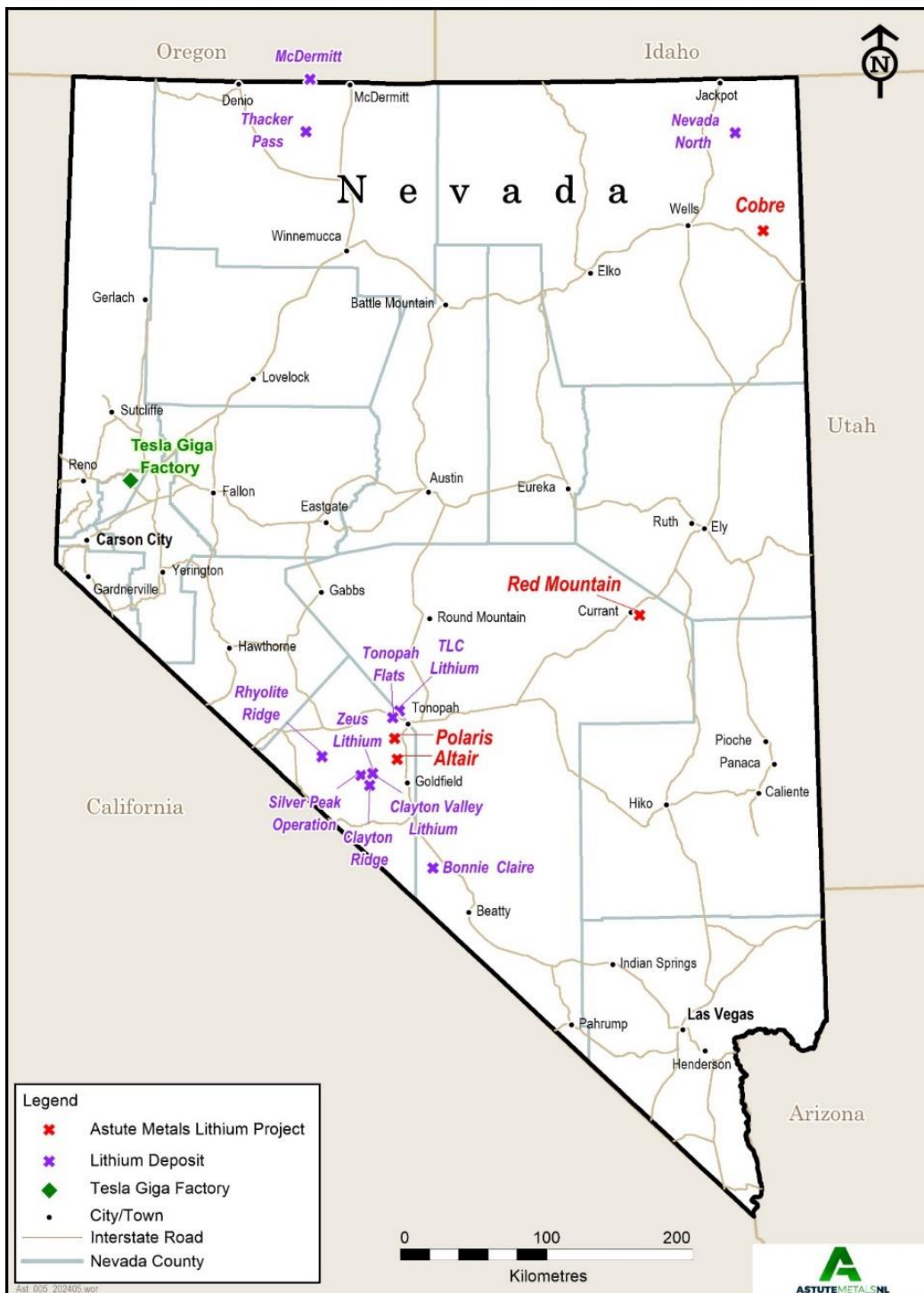
Other attractive Project characteristics include outcropping claystone host-rocks and close proximity to infrastructure, including the Project being immediately adjacent to the Grand Army of the Republic Highway (Route 6), which links the regional cities of Ely with Tonopah.

## Next Steps

The Company is awaiting outstanding assay results for the remaining eight drill holes completed as part of the maiden drill campaign at Red Mountain, which are expected to be returned in two batches during the month of July. Once received, a full interpretation of both drilling and surface sampling results will be conducted ahead of establishing detailed future plans, including follow-up drilling, for the Project.



**Figure 2.** Sub-cropping mottled green/brown/white claystone – sample site 602232/2,940ppm Li.



**Figure 3.** Location of Astute Lithium Projects, and Nevada lithium deposits.

<sup>1</sup> ASX: ASE 18 June 2024 'Significant Lithium Discovery at Red Mountain Project'

<sup>2</sup> ASX: ASE 27 November 2023 'Outstanding Rock-Chip Assays at Red Mountain Project'

<sup>3</sup> NYSE: LAC 2 November 2022 Feasibility Study NI 43-101 Technical Report for the Thacker Pass Project

<sup>4</sup> OTCMKTS: ABML 26 February 2023 'Technical Report Summary for The Tonopah Flats Lithium Project, Esmeralda.'

<sup>5</sup> TSX.V: LI 17 March 2023 'Tonopah Lithium Claims project NI 43-101 technical report – Preliminary Economic Assessment'

<sup>6</sup> Lithium Carbonate Equivalent wt% (LCE) has been calculated from Lithium parts-per-million (ppm) by the formula  $LCE = Li \text{ (ppm)} \times 5.323 / 10,000$

## 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 (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.</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 (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.</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 (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.).</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>	Chip samples were logged for lithology (see appendix 2)

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, calibration factors applied and their derivation, etc.</p> <p>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.</p>	<p>Samples 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 within 3 standard deviations of certified values. No material systematic bias nor 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>Sample intervals to be 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>	Claystone beds are regionally shallow-dipping at ~20° to the east although locally this may vary across the Project with some evidence of faulting and potential folding
Sample security	The measures taken to ensure sample security.	Samples stored at secured yard and shed located in township of Currant until delivered by staff or contractors to the ALS lab at Elko, NV
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) held in 100% Astute subsidiary Needles Holdings Inc.</p> <p>Claims located on Federal (BLM) Land</p> <p>Drilling conducted on claims certified by the Bureau of Land Management (BLM)</p>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<p>No known previous lithium exploration conducted at Red Mountain</p> <p>Exploration conducted elsewhere in Nevada by other explorers referenced in announcement body text</p>
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"> <li>◦ easting and northing of the drill hole collar</li> <li>◦ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>◦ dip and azimuth of the hole</li> <li>◦ down hole length and interception depth</li> <li>◦ hole length.</li> </ul> <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 (e.g. 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>	<p>Not applicable</p> <p>Drill Intersections are quoted in both lithium ppm and as wt% Lithium Carbonate Equivalent (LCE). LCE is calculated as <math>LCE = Li \text{ (ppm)} \times 5.323 / 10,000</math>, as per industry conventions.</p>

## 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 (e.g. 'down hole length, true width notknown').</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 (e.g. 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>	Rock chip results demonstrate further work at the Red Mountain project is most likely warranted, however this will be subject to receipt of the remaining 8-holes worth of assay results

# APPENDIX 2 – Red Mountain Rock Chip Sample Assay Table

Sample ID	Easting (NAD83)	Northing (NAD83)	Li (ppm)	Description
602247	637782.2	4288743	1935	Claystone
602248	637782.2	4288743	1215	Claystone with Colluvial Gravel
602249	637320.8	4288194	144	Claystone
602250	637320.8	4288194	99	Claystone with Colluvial Gravel
602251	637534.4	4288197	728	Claystone
602252	637534.4	4288197	510	Claystone Colluvial Gravel
602253	637263	4290297	29	Khaki tan Claystone
602254	637232	4290438	40	Light green tan sandy Claystone
602255	637577	4290547	26	Tan khaki Claystone
602256	637614	4290587	28	Tan light yellow/brown laminated sandy Claystone
602257	637487	4290660	14	Sandstone very fine grained and clayey
602258	637167	4290508	716	Khaki green Claystone
602259	639834	4294748	32	Clayey soil in a shaly rock scree
602260	640083	4295007	49	Clayey mudstone shale
602261	637099.9	4287805	564	Claystone - laminated
602262	637099.9	4287805	357	Claystone Colluvial Gravel
602263	637676.5	4286218	60	Claystone - laminated
602264	637676.5	4286218	42	Claystone Colluvial Gravel
602265	636569	4290199	373	Light brown/cream Claystone
602266	636636	4290236	125	Light brown Claystone
602267	636645	4290235	158	Light brown/cream Claystone
602268	636654	4290230	272	Light brown Claystone
602269	636629	4290222	133	Reddish cream wht claystone
602270	636532	4290176	359	Light brown/cream Claystone
602271	636543	4290172	130	Khaki tan Claystone, shaley habit
602272	636766	4290211	282	Very light brown claystone
602273	636825	4290183	152	Green/grey mudstone/claystone
602274	636830	4290195	152	Interbedded green/grey claystone and pale green sandstone
602275	636944	4291592	2550	Medium brown claystone
602276	636943	4291614	1695	Medium brown claystone
602277	637118	4291657	29	Medium brown/cream claystone with orange bands
602278	637049	4291594	14	Tan/cream claystone
602279	636965	4291168	2580	Light brown Claystone
602281	636955	4291169	2900	Med brown claystone
602282	636947	4291177	2200	Med brown claystone
602283	636940	4291173	17	Very fine grained reddish tan sandstone
602284	636423.1	4286202	1055	Green grey claystone
602201	637659	4285563	99	Volcaniclastic -fine grained Tuff
602202	637653	4285493	263	Light green fine grained sandy unit - ?Tuff
602203	637635	4285465	986	Claystone - Dark green

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Sample ID	Easting (NAD83)	Northing (NAD83)	Li (ppm)	Description
602204	637817	4285431	46	Polymictic mass debris flow? Cobble size material
602205	637813	4285432	312	Sandy Claystone - volcanoclastic
602206	637813	4285429	200	Volcanoclastic sandy claystone - more soil than rock
602207	637816	4285422	55	Polymictic mass debris flow? Cobble size material
602208	637860	4285315	64	Limestone unit
602209	637857	4285294	173	Fine grained sandy tuffaceous unit Light brown
602210	637781	4285407	899	Light green sandy clayey band 20-30cm between
602211	637778	4285418	504	Coarse sandy gravel unit - on either side of 602210
602212	637747	4285461	22	White 'bleached' fine grained Tuff
602213	637108	4290214	1395	Claystone
602214	637108	4290214	2180	Claystone
602215	637108	4290214	154	Claystone
602216	637235	4290131	2640	Claystone - soil/rock
602217	637216	4290194	212	Claystone - soil/rock
602218	637233	4290355	11	Light cream laminated calcareous sandy siltstone/mudstone
602219	637136	4290487	257	White 'bleached' fine grained Tuff
602220	637133	4290516	249	White 'bleached' fine grained Tuff
602221	637125	4290550	347	White 'bleached' fine grained Tuff
602222	637091	4290605	36	White 'bleached' fine grained Tuff
602223	637065	4290629	1235	Claystone, weathered Light brown Khaki Gry (Mottled)
602224	637066	4290652	1130	Claystone, weathered Light brown Khaki Gry (Mottled)
602225	637061	4290474	50	Cream/white + Light brown/orange fine grained Tuff
602226	637057	4290482	230	Limestone / Limey unit - hard
602227	637077	4290401	30	Cream/Wht + Light brown/Org fine grained Tuff
602228	636963	4290585	75	Light cream sandy Tuff
602229	636962	4290589	37	Light cream sandy Tuff
602230	636952	4290599	76	Limestone - Limey unit
602231	637080	4290682	4150	Light brown/green Claystone
602232	637079	4290686	2940	Claystone - mottled green/brown/white
602233	637086	4290672	1760	Claystone
602234	636895	4290417	137	Limestone
602235	637144	4290201	1820	Claystone
602236	637151	4290189	1730	Claystone
602237	637108	4290214	3030	Laminated Claystone
602238	637108	4290214	3520	Claystone
602241	637637	4285458	1340	Dark green Claystone
602242	637632	4285451	129	Limestone
602243	637630	4285348	65	Light green sandy unit / Tuff
602244	637531	4285230	597	Light green fine grained sandy Tuff
602245	637380	4285480	94	Green laminated interbedded silty sandy Tuff
602246	637351	4285460	375	Green Khaki siltstone/mudstone/claystone

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