

## Metallurgical Test-work Delivers 132% Upgrade to Lithium Mineralisation at Red Mountain, Nevada

### Highlights

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- Attrition scrubbing test-work substantially upgrades the lithium mineralisation at the Red Mountain Project, successfully removing waste and reducing reagent-consuming minerals
- High-grade lithium sample upgraded 44.8% from 2,900ppm to **4,200ppm Li** in <20 µm product
- Low-grade lithium sample upgraded 132% from 1,120ppm to **2,620ppm Li** in <20 µm product
- Mass reductions of 59.6% and 63.1% achieved in high- and low-grade samples, respectively
- Calcite reductions of 15.7% and 35.6% achieved in high- and low-grade samples, respectively
- Clay mineral Hectorite identified as the sole lithium-bearing phase
- Opportunity for improved lithium recovery and calcite removal through further test-work

Venari Minerals NL (ASX: VMS) (“VMS”, “Venari” or “the Company”) is pleased to advise that attrition scrubbing beneficiation test-work has resulted in significant upgrades to the lithium mineralisation from its Red Mountain Lithium Project in Nevada, USA.

Attrition scrubbing is an established technique whereby minerals are separated through the action of particles impacting one another within a slurry. The objective of the test-work is to separate clay from other minerals and achieve an upgraded concentrate of lithium-bearing clay with decreased waste minerals.

The results from the test-work were outstanding, with upgrades of 44.8% and 132% achieved in lithium concentration from high-grade and low-grade samples respectively, with concurrent 59.6% and 63.1% reductions in sample mass, and reductions in reagent-consuming mineral calcite of 15.7% and 35.6%.

These latest results add to a growing body of successful metallurgical test-work for the Red Mountain Project, as the project advances towards a maiden Mineral Resource Estimate. Test-work to date indicates high lithium leachabilities of up to 98%<sup>5</sup>, and the ability to beneficiate Red Mountain mineralisation through Falcon C<sup>1,2</sup>, and now enhanced lithium upgrading and waste removal through attrition scrubbing.

The Company intends to conduct further tests with a view to improving these already promising results and has also recently commissioned lithium carbonate test-work for the Project, which aims to produce a technical-grade lithium carbonate product and a subsequent upgraded battery-grade lithium carbonate product.

**Venari Chairman, Tony Leibowitz, said:**

*“This is a very encouraging result from early-stage metallurgical test-work, confirming the potential to upgrade the lithium-bearing clays at Red Mountain into a high-grade concentrate with strong mass reduction and low deleterious elements.*”

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“The Company is continuing to rapidly progress multiple work streams at Red Mountain, with metallurgical test-work for a lithium battery product now underway and a maiden Mineral Resource Estimate to be completed by the end of 2025.”

**Background**

Located in central-eastern Nevada (Figure 3), adjacent to the Grand Army of the Republic Highway (Route 6), the Red Mountain Project was staked by Venari in August 2023.

The Project area has broad mapped tertiary lacustrine (lake) sedimentary rocks known locally as the Horse Camp Formation. Elsewhere in Nevada, equivalent rocks host large lithium deposits (see Figure 3) such as Lithium Americas’ (NYSE: LAC) 62.1Mt LCE Thacker Pass Project<sup>3</sup> and American Battery Technology Corporation’s (NASDAQ: ABAT) 15.8Mt LCE Tonopah Flats deposit<sup>4</sup>.

Prior to the current campaign, a total of 19 drill holes have been completed at the project to date for a combined 3,336 of drilling. These campaigns have been highly successful, intersecting strong lithium mineralisation in almost every hole<sup>6</sup>.

Scoping leachability testwork on mineralised material from Red Mountain indicates high leachability of lithium of up to 98%, varying with temperature, acid strength and leaching duration<sup>5</sup>, and proof-of- concept beneficiation test-work has indicated the potential to upgrade the Red Mountain mineralisation<sup>1,2</sup>.

**What is Attrition Scrubbing?**

Attrition scrubbing is an established mineral processing technique whereby a mineral is ‘scrubbed’ through the action of particles impacting one another within a slurry. This process is often used to remove a coating of clay from another mineral of economic interest (such as those in heavy mineral sands), however for lithium clays it is used to separate other minerals, such as calcite, from clays in order to retain the clay.

Hole ID	From (ft)	To (ft)	Composite
RMDD002	165	170	High-grade
RMDD002	170	175	
RMDD002	175	180	
RMDD002	180	186	
RMDD002	186	190.5	
RMDD002	190.5	195	
RMDD002	195	201.7	
RMDD002	215	220	Low-grade
RMDD002	220	225.4	
RMDD002	225.4	230	
RMDD002	230	235	

Table 1. Source drill-hole details for Attrition Scrubbing composite samples

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### Attrition Scrubbing Test-work Overview

The purpose of the test-work was to liberate lithium-bearing clay from unmineralised gangue (waste) with a view to both increasing lithium grade and decreasing sample mass, including a decrease in reagent consuming waste minerals such as calcite. Previous Red Mountain beneficiation test-work, utilising a Falcon C concentrator, successfully increased grade while reducing mass<sup>1,2</sup>. The Attrition Scrubbing test-work was undertaken to investigate an alternative means of beneficiation of Red Mountain mineralisation.

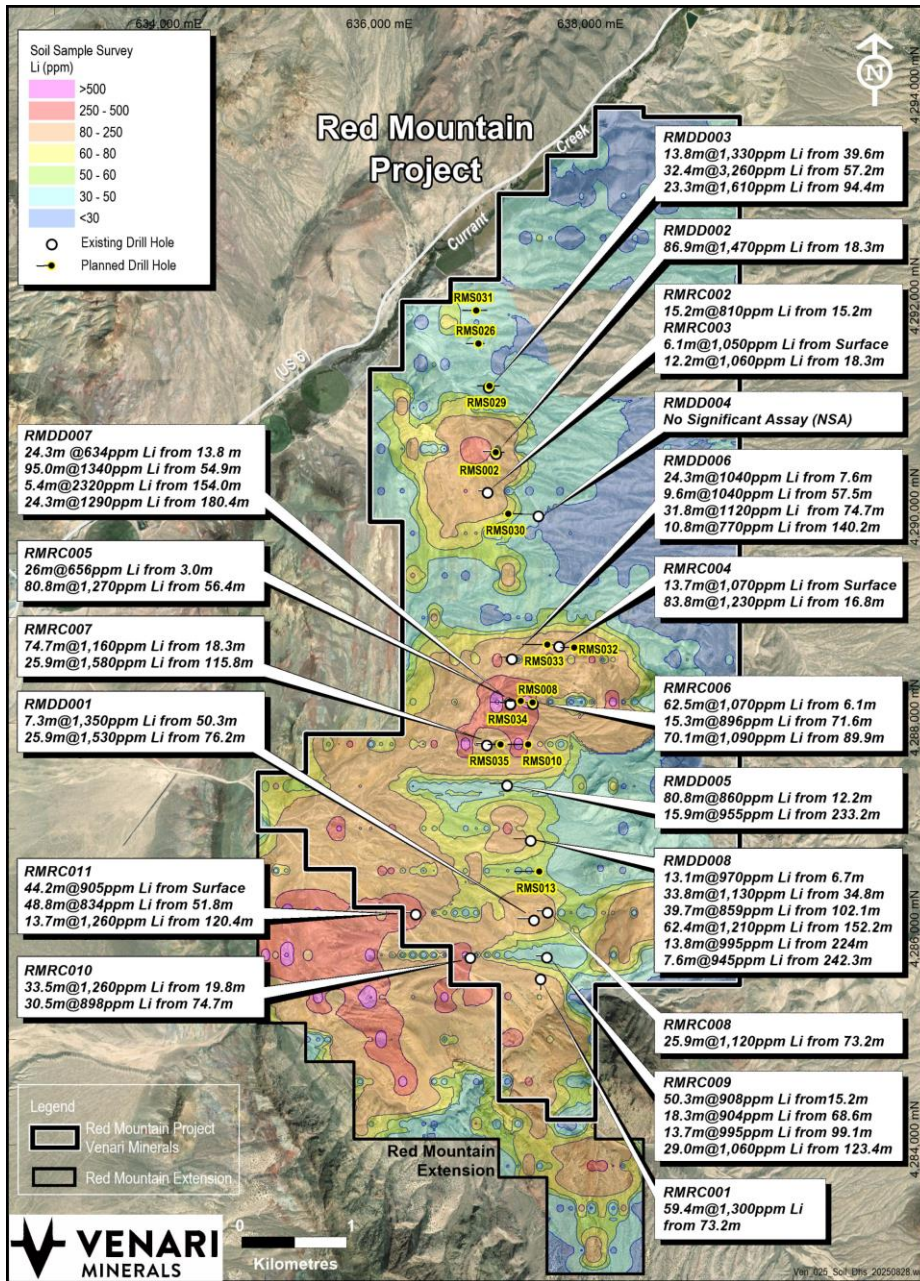


Figure 1. Red Mountain drill-hole locations and intersections over gridded lithium soil geochemistry<sup>7</sup>

Two samples were provided to Hazen, a high-grade and a low-grade composite, made up of half HQ drill core from diamond drill hole RMDD002 (Table 1, Figure 1). Samples were stage-crushed to 850µm and split into 1kg charges for attrition scrubbing experiments. A 100g sub-sample was split and pulverised by powder XRD for quantitative mineralogy. Head assays were conducted on each of the composite samples (Table 2).



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Composite Sample	Li (ppm)	Ca (%)
High-grade	2,500	13.0
Low-grade	1,020	19.2

Table 2. Lithium and calcium head assays for composite samples

Three 1kg attrition scrubbing experiments were conducted on the high-grade composite in order to determine the pulp density that yielded the highest lithium grade, lithium recovery, and rejection of calcite. Pulp densities of 30%, 40% and 50% were tested. A single attrition scrubbing experiment was performed on the low-grade composite, using the optimal pulp density based on high-grade composite test results.

Attrition scrubbing test-work was conducted using a Denver attrition scrubbing machine, a 1L plexiglass cell and an impeller speed of 1,330rpm for a 12-minute test time. The scrubbed material was then wet-screened at 106, 75, 38 and 20µm size fractions which were each dried, weighed and assayed for lithium and calcium, and mineralogy determined using powder XRD. Clay minerals are very fine and concentrate in the <20µm fraction.

Glycolated x-ray diffraction (XRD) was conducted on the high-grade composite head sample to establish the clay species present and scanning electron microscopy (SEM) was conducted on two of the high-grade composite attrition products to investigate whether intergrowths of calcite and clay were present and affecting attrition scrubbing results.

## Results

### Attrition scrubbing – High-grade composite

The pulp density that yielded the highest grade and recovery of lithium into the <20µm fraction was 30% solids, with a 4,200ppm lithium grade from a calculated feed grade of 2,900ppm Li, representing a 45% increase in lithium grade at a 58.8% recovery. The calcite grade of the <20µm fraction was 32.1% compared to a calculated feed grade of 38.1%, representing a 15.7% reduction in calcite content. A feed weight of 911g resulted in a 368g <20µm size fraction after attritioning, indicating a mass reduction of 60%.

### Attrition scrubbing – Low-grade composite

The low-grade sample was attritioned at a pulp density of 30%, which yielded a 2,600ppm lithium grade from a head grade assay of 1,120ppm Li (Table 2), representing a 132% increase in lithium grade. Calculated head-grade nor recovery were reported by Hazen for this sample, as the coarsest (106 – 850µm) size fraction after attritioning had a lithium grade of below the analytical method (60ppm) preventing a direct calculation. It is noted that assigning the analytical method limit of 60ppm to the 850µm sample, a conservative approach, would have resulted in a calculated *maximum* head grade of 1,120ppm Li, a *minimum* grade increase of 132% and a *minimum* lithium recovery of 85%. The calcite grade of the <20µm fraction was 32.7% compared to a calculated feed grade of 50.8%, representing a 36% reduction in calcite content. A feed weight of 947g resulted in a 349g <20µm size fraction after attritioning, indicating a mass reduction of 63%.

Complete attrition scrubbing results are tabulated in Appendix 2.

### XRD Clay Characterisation

The clay contained in the high-grade composite head sample was identified as Hectorite, a clay mineral that is also present and hosts lithium mineralisation at the world-class Thacker Pass deposit<sup>3</sup>. No other clay

minerals were identified in the XRD analysis. The gangue (waste) mineralogy of the sample, in decreasing order of abundance, comprised calcite (39.2%), K-feldspar (21.9%), quartz (7.9%), plagioclase (5.7%) and anatase (0.5%). Complete results are tabulated in Appendix 3.

#### Scanning Electron Microscopy

SEM microscopy confirmed that the clay in the high-grade composite sample was Hectorite, and point analysis identified this was the lithium-bearing phase. Calcite and hectorite intergrowths were observed, although not intensely so and calcite also occurred as granular particles within a hectorite matrix. Hectorite also formed large liberated (>80% area) and high middling (50-80%) particles. It was concluded that the presence of large, liberated particles of hectorite indicated that the clay had not readily hydrated in the test-work and that further test-work, with an increased water exposure time, may yield better liberation and therefore attrition scrubbing outcomes.

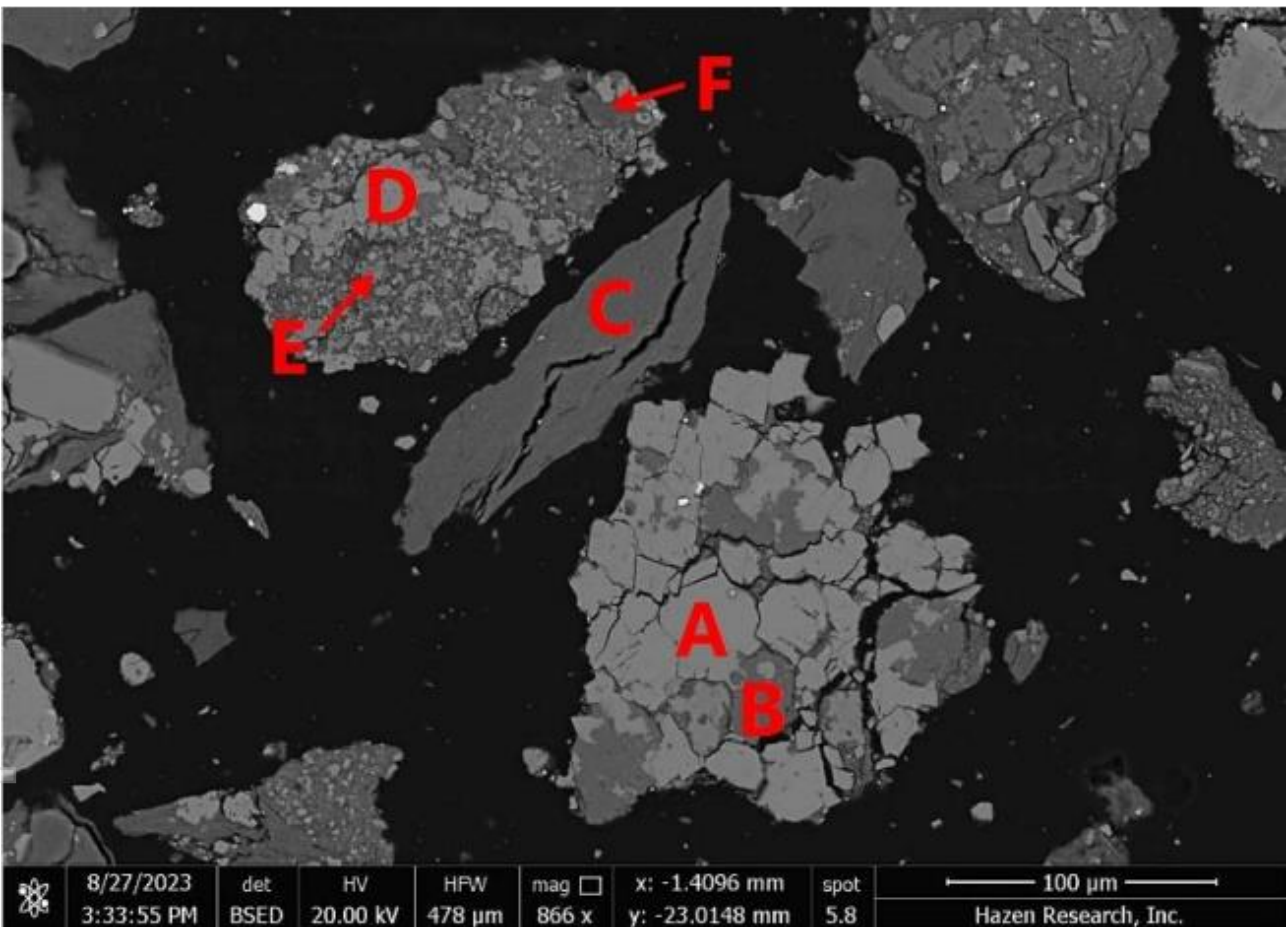


Figure 2. SEM Backscatter image of particles of calcite (A) intergrown with K-feldspar (B), Hectorite (C) and composite particle of calcite (D), K-feldspar (E) and Hectorite (F)

#### Interpretation and Next Steps

The attrition scrubbing test-work results indicate the method has excellent utility for both upgrading lithium grade of Red Mountain mineralisation and the removal of acid-consuming calcite. Compared to beneficiation results from Falcon C test-work, attrition scrubbing yielded higher lithium upgrades (45-157% vs 33-38%) with greater mass reduction (60-63% vs 36.3-37.8%), however with a broader range of recoveries (58.8-85.2% vs 73.9-77.8%). Reduction of calcium was comparable between the two methods.

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SEM analysis established that the hectorite clay was not sufficiently hydrated during attrition, preventing the clay from being broken and dispersed during attrition. Extended exposure to water (as might be achieved as easily as pumping a slurry from a mine site to a processing plant) may result in higher recoveries of hectorite clay to the <20µm fraction, improving lithium recoveries and grades. Other options include crushing or milling the feed to a finer size, such as 600µm, before conducting attrition scrubbing. This would need to be confirmed with additional test-work, which the Company intends to undertake.

The attrition scrubbing test-work program is considered overwhelmingly successful, producing high-grade concentrates of lithium-bearing hectorite clay while simultaneously removing acid-consuming minerals, with room for improvement in further test-work. As the Red Mountain project continues to advance towards Mineral Resource Estimate stage this year, the metallurgical test-work program will continue to advance the Company's understanding of processing performance of Red Mountain mineralisation with a view to informing technical studies tentatively planned for CY2026.

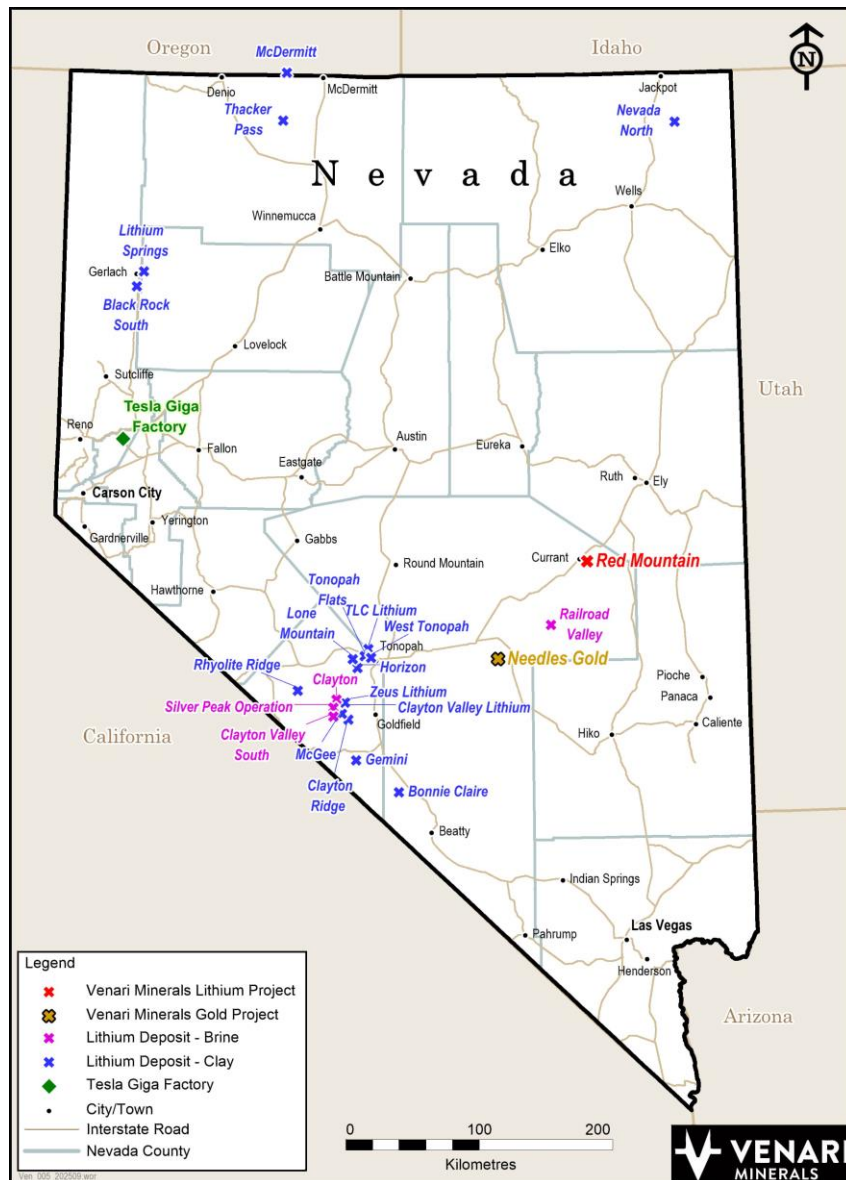


Figure 3. Location of Red Mountain Lithium Project and other Nevada lithium deposits

## References

- 1 – ASX: ASE, 22 April 2025, *Beneficiation testwork successfully upgrades mineralisation at Red Mountain*
- 2 - ASX: ASE, 10 June 2025, *Beneficiation Delivers 4,480ppm Lithium Clay Concentrate at Red Mountain*
- 3 - NYSE: LAC, 31 December 2024, *Updated NI 43-101 Technical Report for the Thacker Pass Project*
- 4 - OTCMKTS: ABML, 26 February 2023, *Technical Report Summary for The Tonopah Flats Lithium Project, Esmeralda*
- 5 - ASX: ASE, 9 December 2024, *Positive initial metallurgical results from Red Mountain*
- 6 - ASX: ASE, 25 June 2025, *Exceptional Drill-hole Intersects combined 170m of Lithium Mineralisation at Red Mountain*
- 7 - ASX: ASE, 3 September 2025, *Outstanding lithium anomalism in surface sampling at Red Mountain Extension*

## Authorisation

This announcement has been authorised for release by the Board of Venari Minerals NL.



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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 Venari Minerals NL and is eligible to participate in share-based incentive schemes 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.

## APPENDIX 1 - JORC Code, 2012 Edition – Table 1

### 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>HQ diamond drilling was undertaken for drill sample collection. Samples were collected on a nominal 5-foot basis or sampled to geological boundaries based on lithological logging. Samples were photographed, half-cored, and despatched to an external lab by an external contractor.</p> <p>Staff sampled the remaining core for composite sample preparation, which was placed into 25l buckets and sealed for delivery to Hazen Research Inc. in Golden, Colorado</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>	<p>HQ drilling methods employed. Core was not oriented.</p>



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<p>Drill sample recovery</p>	<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>	<p>Sample recoveries established by recovery logging and dry sample weights undertaken by independent laboratory prior to sample preparation and analysis.</p> <p>Poor drill core recovery at surface is common.</p> <p>Instances of poor recovery have not materially affected results in this release.</p>
<p>Logging</p>	<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>	<p>Drill core for the entire hole was logged for lithology by company geologists</p> <p>Logging is qualitative</p> <p>Photography of drill core undertaken by contractors in Elko, NV, prior to delivery to external laboratory</p>

Criteria	JORC Code explanation	Commentary
<p>Sub-sampling techniques and sample preparation</p>	<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>Core was half-cored at a third part contractor facility in Elko, NV, and submitted to ALS Laboratories in Elko for preparation and analysis. Half core was then returned to the Company.</p> <p>Staff sampled the remaining core for composite sample preparation, which was placed into 25l buckets and sealed for delivery to Hazen Research Inc. in Golden, Colorado.</p>



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<p>Quality of assay data and laboratory tests</p>	<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>Assays reported in this release were analysed by ICP-OES for lithium and calcium. The method is considered appropriate for metallurgical testwork of the nature discussed in this release.</p> <p>XRD analysis was conducted using a Bruker D8 Advance XRD instrument with Davinci design and Lynxeye detector, utilising cobalt radiation at 3kV and 40mA. Scan range was 5-75° 2-theta with a 0.01° step size and 0.4s step time.</p> <p>Dry powder and glycolation methods were employed.</p> <p>SEM was conducted using a Thermo Fisher FEI Quanta 650 field emission gun SEM.</p>
<p>Verification of sampling and assaying</p>	<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>Not applicable.</p>
<p>Location of data points</p>	<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>Drill collar locations determined using hand held GPS with location reported in NAD83 UTM Zone 11 with expected accuracy of +/- 10m</p> <p>Downhole surveys conducted on drill holes at nominal 100ft intervals, with drill rigs lined up by compass and clinometer at start of hole.</p>



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## APPENDIX 1 - JORC Code, 2012 Edition – Table 1

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>	Sampling spacing appropriate for early stage metallurgical testwork
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°-45° to the east and varying locally 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 labs
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable

## APPENDIX 1 - JORC Code, 2012 Edition – Table 1

### SECTION 2 - REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  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.	Red Mountain Claims held in 100% Astute subsidiary Needles Holdings Inc. Claims located on Federal (BLM) Land Drilling conducted on claims certified by the Bureau of Land Management (BLM)
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No known previous lithium exploration conducted at Red Mountain.  Exploration conducted elsewhere in Nevada by other explorers referenced in body text.
Geology	Deposit type, geological setting and style of mineralisation.	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.  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>	<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>	<p>Drill hole information is tabulated in body text and/or shown in relevant maps.</p>
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## 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 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 (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</p>	<p>The Red Mountain lithium project is emerging as a significant lithium discovery in Nevada and is being advanced toward a maiden Mineral Resource Estimate later this year. It is the Company's intent to advance the project beyond this to technical studies.</p>



## APPENDIX 2 – Attrition Scrubbing Test Results

Hazen ID	Experiment	Pulp Density, %	Sample ID	Weight, %		Assay, %					Distribution, %			
						Chemical		XRD			Li	Ca	Smectite	Calcite
						Li	Ca	Smectite	Calcite	Quartz				
56283-1 (High Grade)	4113-123	30	850 × 106 µm	225.75	24.8	0.15	15.8	10.8	42.8	11.6	13.3	29.0	13.2	27.9
			106 × 75 µm	76.83	8.4	0.23	14.8	17.0	41.2	6.2	6.8	9.3	7.0	9.1
			75 × 38 µm	136.46	15.0	0.23	14.1	16.4	40.2	6.5	11.8	15.7	12.1	15.8
			38 × 20 µm	103.69	11.4	0.23	16.6	18.2	43.8	6.2	9.1	14.0	10.2	13.1
			Minus 20 µm	367.78	40.4	0.42	10.7	29.0	32.1	6.1	58.8	32.0	57.5	34.1
			Calculated feed to attrition	910.51	100.0	0.29	13.5	20.4	38.1	7.5	100.0	100.0	100.0	100.0
56283-2 (Low Grade)	4113-131	30	850 × 106 µm	400.08	42.3	<0.006	23.8	4.0	62.5	17.0	nc	54.0	16.3	52.0
			106 × 75 µm	52.00	5.5	0.04	22.0	5.4	59.8	10.5	nc	6.5	2.9	6.5
			75 × 38 µm	84.27	8.9	0.06	22.8	5.7	57.1	9.8	nc	10.9	4.9	10.0
			38 × 20 µm	61.69	6.5	0.10	21.8	7.3	61.1	9.7	nc	7.6	4.6	7.8
			Minus 20 µm	348.82	36.8	0.26	10.6	20.1	32.7	14.1	nc	21.0	71.4	23.7
			Calculated feed to attrition	946.86	100.0	nc	18.6	10.4	50.8	14.5	nc	100.0	100.0	100.0

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### APPENDIX 3 – Clay characterisation quantitative XRD Diffraction Results

Phase ID	Approximate Chemical Formula	Mass%
		56283-1 Head
Calcite	CaCO <sub>3</sub>	39.2
Quartz	SiO <sub>2</sub>	7.9
K-feldspar (Microcline/Sanidine)	(K,Na)(Si,Al) <sub>4</sub> O <sub>8</sub>	21.9
Plagioclase (Albite)	NaAlSi <sub>3</sub> O <sub>8</sub>	5.7
Mica (Muscovite)	KAl <sub>2</sub> (Si <sub>3</sub> Al)O <sub>10</sub> (OH,F) <sub>2</sub>	nd
Smectite (Hectorite)	Na <sub>0.3</sub> (Mg,Li) <sub>3</sub> Si <sub>4</sub> O <sub>10</sub> (OH) <sub>2</sub>	24.8
Anatase	TiO <sub>2</sub>	0.5
<b>Total</b>		<b>100.0</b>

Note: All mineral constitutes are normalized to 100%.

nd = not detected