ASTUTEMETALSNL

23 November 2023

MORE CLAYSTONE INTERSECTED IN FOLLOW-UP DRILLING AT ALTAIR LITHIUM PROJECT, USA

Drilling confirms claystone in widely spaced holes drilled over 7km



Key Highlights

- **Follow-up drilling campaign completed with two further holes drilled at Altair for 312.4m (1,025ft).**
- **Hole AL03 intersected 22.9m (75ft) of claystone and gravelly clay from 153.9m (505ft) to the end-of-hole.**
- **Hole AL02 intersected a combined 45.7m (150ft) of claystone and gravelly clays over nine zones with interbedded gravels.**
- **Drilling targeted extensions of the mineralised Siebert formation claystone east of the successful intersection in hole AL01.**
- **Samples have been dispatched with laboratory assays expected to be returned by the end of this calendar year.**

Astute Metals NL (ASX: ASE) ("ASE", "Astute" or "the Company") is pleased to advise that follow-up drilling has intersected more intervals of prospective claystone host rock at its highly prospective 100%-owned Altair Lithium Project in Nevada, USA.

The follow-up drilling campaign was designed to build on the success of the Company's first hole at the Altair Project, completed in July, which successfully intersected two broad zones of claystone-hosted lithium mineralisation. Two further widely spaced holes were drilled as part of the recent campaign, testing strategic locations across a 7km cross-section of the Altair Project. Both holes intersected claystones, with hole AL03 intersecting 22.9m (75ft) of claystone from 153.9m (505ft) to the end-of-hole, and AL02 intersecting a combined 45.7m (150ft) of claystone and gravelly clays in nine individual zones of claystones interbedded with fine gravels.

Samples from the drill campaign have been despatched to ALS Laboratories in Reno, with assay results expected to be returned to the Company by the end of the calendar year.

Astute Executive Chairman, Tony Leibowitz, said:

"Achieving two further significant claystone intersections as part of the recent drilling campaign at Altair is another encouraging development in our North American lithium strategy. These new intercepts are located to the east of our first hole, substantially expanding the prospective horizon to 7 kilometres and further reinforcing the potential scale of the opportunity at this project. We look forward to receiving assay results by the end of this year."

Background

Centred south-west of the township of Tonopah, in the heart of one of the world's most active lithium exploration districts, the Altair Project was strategically staked proximal to outcropping tertiary sedimentary host rock (known locally as the Siebert formation) that is known to host claystone lithium deposits around Nevada. Such deposits include the 15.8Mt LCE (lithium carbonate equivalent) Tonopah Flats deposit[1] and the 9.79Mt LCE TLC Lithium Project[2] (Figure 4).

The Company completed the first hole at Altair in Q3 2023, with drill-hole AL01 successfully intersecting two zones of lithium mineralisation:

- 33.5m @ 481ppm Li from 80.8m (265ft); and
- 33.5m @ 508ppm Li from 147.8m (485ft) to End-of-Hole (181.4m/595ft).

The Company re-commenced drilling at Altair with a higher-powered Reverse Circulation (RC) drill rig more appropriate to contend with the challenging drilling conditions encountered previously at the project (Figure 1). Two holes were drilled at Altair for a combined 312.4m (1,025ft), with the objective of testing for the presence of claystone to the east of the first successful intersection over a strike extent of approximately 7km (Figures 2 and 3).



Figure 1. Drill rig set up at site AL03.

Interpretation

Drill-hole AL03 intersected 22.9m of blue-green-cream coloured claystones and gravelly clays, of a similar nature to those intersected in AL01, located approximately 2km to the west of AL03. However, the intersection of clays was deeper than in AL01, with claystone starting at a depth of 153.9m in AL03, compared to a depth of 71.6m in AL01.

Drill-hole AL02, located approximately 5km east of AL03, intersected a series of interbedded claystones, gravelly clays and fine gravels, starting with intersection of the first claystone bed at a shallow depth of 22.9m (75ft). A further eight claystone-gravelly clay beds were intersected, varying in thickness from 1.5m to 12.2m, each separated by beds of fine gravels.

Given the variation in depth of intersection and thickness of the claystones between all three holes, and the variable presence of gravels within/between the claystones beds, it is not immediately clear if and how the claystones intersected across the project relate to one another. However, the coarse gravels intersected at the top section of each of the three holes drilled on the project have been interpreted to be a contiguous part of the younger quaternary alluvial unit. The finer gravels (Figure 2) are potentially part of the older Siebert Formation, or the younger quaternary unit.

CAUTIONARY STATEMENT ON VISUAL ESTIMATES OF MINERALISATION

References in this announcement to visual results are from geological logging of percussion chip samples taken from exploration drilling. The claystone lithology intersected in drilling of AL02 and AL03 is potentially the Siebert Formation, a claystone-dominant formation in which claystone-hosted lithium deposits are observed to form elsewhere in the region.

Visual estimates are based on geological logging and thus are preliminary in nature. No attempt is made to predict the lithium content of the intersected claystone and laboratory assays are required to determine the presence of lithium mineralisation. Representative samples from drill-holes AL02 and AL03 have been dispatched to a third-party Laboratory for analysis, with results expected by the end of December 2023.

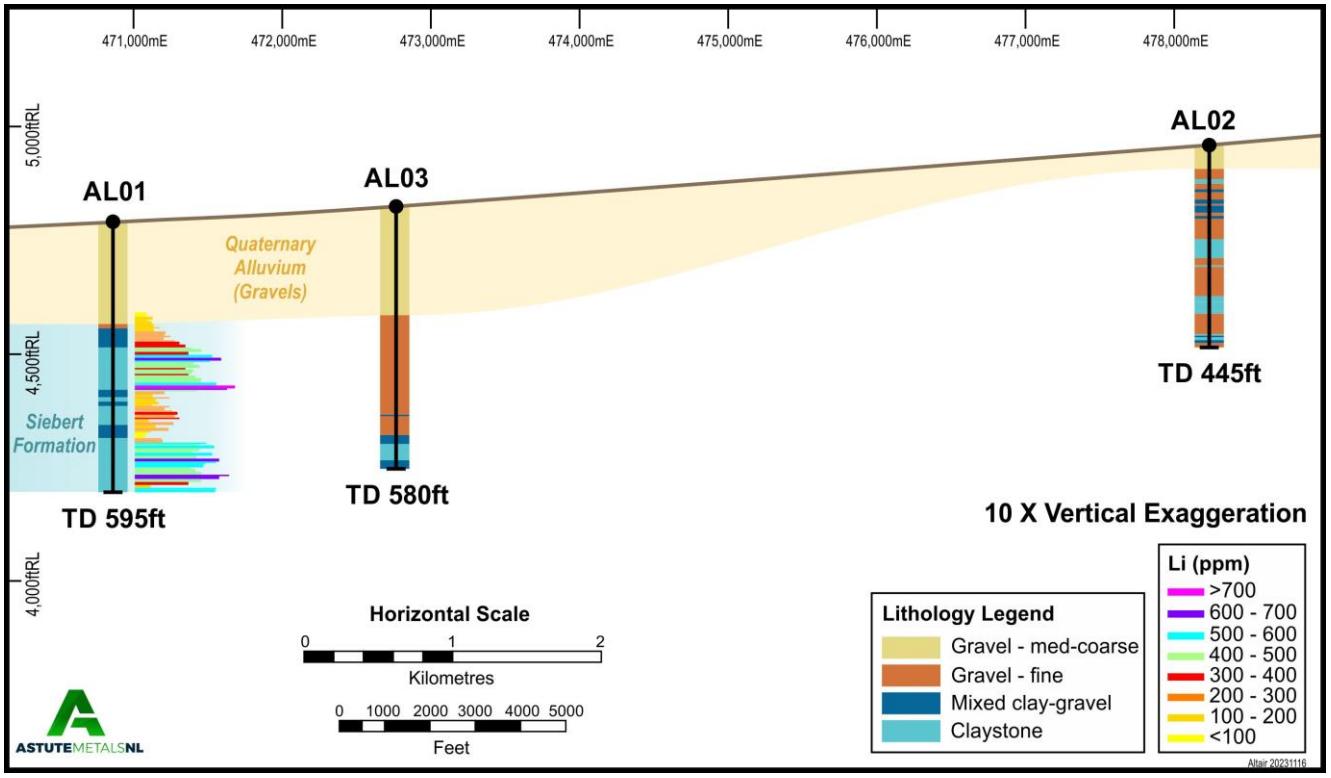

Figure 2. East-west cross-section showing AL01 lithium geochemistry and summary logging for all three holes.

Next Steps

The Company will await assay results to be returned for AL02 and AL03 to complete its geological interpretation of the project area and determine further exploration activities at the Altair Project.

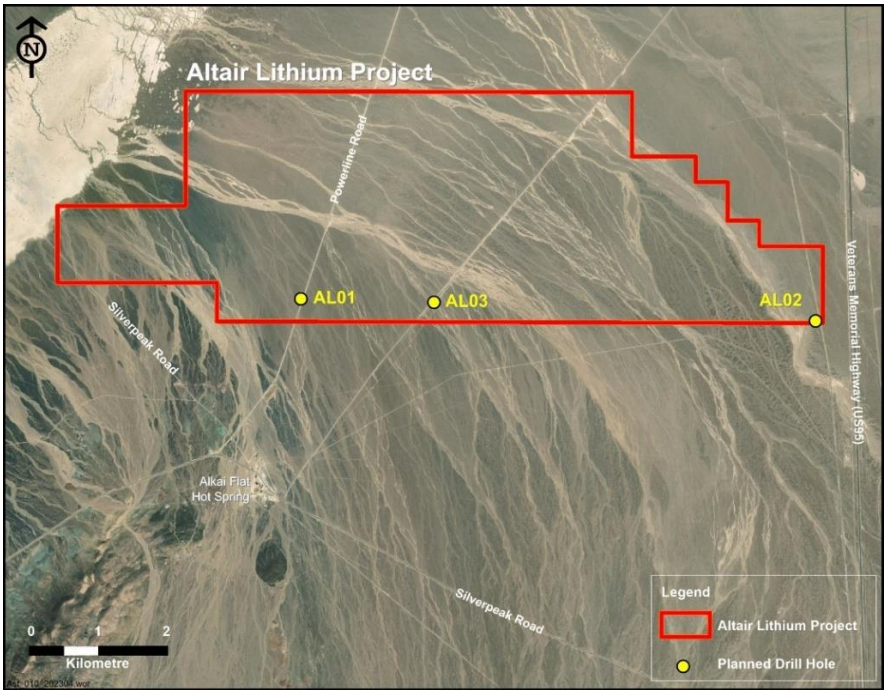

Figure 3. Altair Project drill-hole location plan

Hole ID	Easting	Northing	Dip	Depth
AL01	470859	4189179	-90°	181.4m (595ft)
AL02	478236	4188869	-90°	135.6m (445ft)
AL03	472767	4189133	-90°	176.8m (580ft)

Table 1. Drill collar locations

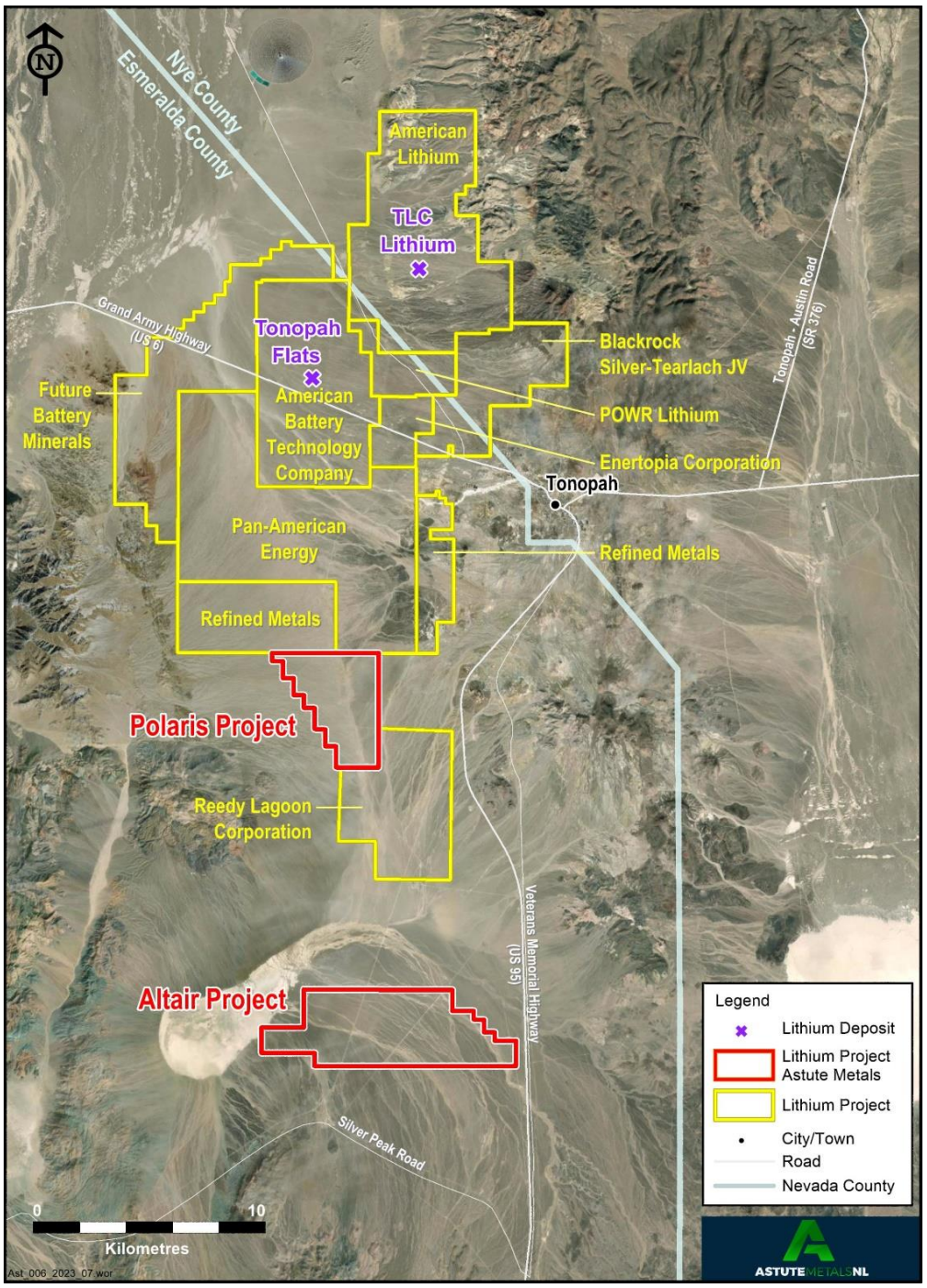

Figure 4. Location of Polaris and Altair Projects, lithium deposits and exploration projects.

1 OTCMKTS: ABML 26 February 2023 'Technical Report Summary For The Tonopah Flats Lithium Project, Esmeralda..'
2 TSX.V: LI 17 March 2023 'Tonopah Lithium Claims project NI 43-101 technical report – Preliminary Economic Assessment'
3 ASX: ASE 23 August 2023 'Broad lithium hits in first Altair drillhole'

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.

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

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Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialisedindustry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheldXRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensuresample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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, suchas where there is coarse gold that has inherentsampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	5.5" reverse circulation and 5.25" tricone drilling was undertaken for drill sample collection. Samples were collected on a 5-foot basis in calico bags, with a 50% split retained from a rotary cone splitter for lab assay. Nominal small drill sample was collected for chip tray and sandwich-sized ziplock bags Samples were air dried on elevated grid mesh until practical to transport 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.
Drilling techniques	Drill type (eg core, reverse circulation, open-holehammer, 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 isoriented and if so, by what method, etc).	5.5" reverse circulation and 5.25" tricone drilling methods employed. Water was injected to assist with transport ofsample from bit to surface, as required.
Drill sample recovery	Method of recording and assessing core andchip sample recoveries and results assessed. Measures taken to maximise sample recoveryand ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gainof fine/coarse material.	Sample recovery established by dry sample weights undertaken by independent laboratory prior to sample preparation and analysis Challenging ground conditions arising from the drilling of quaternary alluvial and soft claystones did result in poor recovery in some instances. Instances of poor recovery are not expected tomaterially impact interpretation of results
Logging	Whether core and chip samples have been geologically and geotechnically logged to alevel of detail to support appropriate MineralResource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative innature. Core (or costean, channel, etc) photography. The total length and percentage of the relevantintersections logged.	Drill cuttings for entire hole logged for lithology by company geologists Logging is qualitative Photography of material intersections of claystone taken of relevant chip trays See Appendix 2 for summary lithology logging

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotarysplit, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparationtechnique. Quality control procedures adopted for all sub-sampling stages to maximise representivityof samples. Measures taken to ensure that the sampling isrepresentative of the in situ material collected,including for instance results for field duplicate/second-half sampling.	Samples, 50% split using a rotary cone splitter, were submitted to ALS Laboratories in Reno for preparation and analysis.
Quality of assay data and laboratory tests	Whether sample sizes are appropriate to thegrain size of the material being sampled. The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial ortotal. For geophysical tools, spectrometers, handheldXRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precisionhave been established.	Samples to be 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. Assay quality to be monitored using pulp blanks, as well as certified reference materials (CRMs) at a range of lithium grades.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entryprocedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Sample intervals to be assigned a unique sample identification number prior to sample despatch Lithium-mineralised claystone Certified Reference Materials (standards), pulp blanks and coarse blanks to be inserted into the sample stream at regular intervals to monitor lab accuracy and potential contamination during sample prep and analytical processes
Location of data points	Accuracy and quality of surveys used to locatedrill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	Drill collar locations determined using hand-held GPS with location reported in NAD83 UTM Zone 11. Expected hole location accuracy of +/-10m No downhole surveys conducted on vertical holes

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the MineralResource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Drill spacing is appropriate for early exploration purposes 5-foot sample interval widely adopted as standard practice in air drilling in the USA.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Claystone beds are regionally sub-horizontal withshallow dip of <5° although locally this may vary
Sample security	The measures taken to ensure sample security.	Samples picked up from the Company's yard in Tonopah by ALS Laboratories for direct delivery to Reno laboratory
Audits or reviews	The results of any audits or reviews of samplingtechniques and data.	Not applicable

APPENDIX 1 - JORC Code, 2012 Edition – Table 1

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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.	Altair Claims held in 100% Astutesubsidiary 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 byother parties.	No known lithium exploration conducted on Polaris or Altair areas. Exploration conducted in the region by other explorers referenced in announcement 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 stateof Nevada. Inputs of lithium from geothermal sources have also been proposed.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: ◦ 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. 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.	Drillhole locations and drilled depths are tabulated in body report All holes drilled vertically
Data aggregation methods	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. 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 shownin detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Intersections, where quoted are weighted by length. A 300ppm Li cut-off was used to quote headline intersections, with allowance for 5ft of internal dilution by lower grade material. No cut-off has been employed where the full intersection of prospective lithology (i.e. Siebert formation). Spot grades also quoted for single drill sample intervals Sample assays from overlying alluvium were excluded from all quoted intersections.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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').	Insufficient information available due to early exploration status
Diagrams	Appropriate maps and sections (with scales) andtabulations 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.	Included in ASX announcement
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	This release describes all relevant information
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysicalsurvey 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.	This release describes all relevant information
Further work	The nature and scale of planned further work (egtests for lateral extensions or depth extensions orlarge-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Drill results arising from the current campaign will dictate further work at the Altair project

APPENDIX 2 – Altair Drilling Summary Lithology Logging

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Hole ID	From (ft)	To (ft)	Rock Formation	Summary Lithology	Comments
AL02	0	55	Unconsolidated	Gravel med-coarse	Polymictic coarse grained
AL02	55	75	Unknown	Gravel - fine	Polymictic fine grained
AL02	75	85	Unknown	Claystone	Puggy
AL02	85	100	Unknown	Gravel - fine	Polymictic fine grained
AL02	100	105	Unknown	Mixed clay-gravel	Gravelly
AL02	105	120	Unknown	Gravel - fine	Polymictic fine grained
AL02	120	130	Unknown	Mixed clay-gravel	Gravelly in part
AL02	130	135	Unknown	Gravel - fine	Polymictic fine grained
AL02	135	150	Unknown	Mixed clay-gravel	Gravelly in part
AL02	150	155	Unknown	Gravel - fine	Polymictic fine grained
AL02	155	160	Unknown	Mixed clay-gravel	Gravelly in part
AL02	160	210	Unknown	Gravel - fine	Polymictic fine grained
AL02	210	250	Unknown	Claystone	Hard. Minor gravel in part
AL02	250	265	Unknown	Gravel - fine	Polymictic fine grained
AL02	265	270	Unknown	Claystone	Hard light brown green claystone
AL02	270	330	Unknown	Gravel - fine	Polymictic fine grained
AL02	330	345	Unknown	Claystone	Hard light brown green claystone
AL02	345	365	Unknown	Claystone	Hard
AL02	365	370	Unknown	Claystone	Puggy clay
AL02	370	415	Unknown	Gravel - fine	Polymictic fine grained
AL02	415	420	Unknown	Claystone	Hard light brown green claystone
AL02	420	425	Unknown	Mixed clay-gravel	Gravel with same claystone as prior interval
AL02	425	430	Unknown	Claystone	Hard light brown green claystone
AL02	430	435	Unknown	Mixed clay-gravel	Gravel with same claystone as prior interval
AL02	435	445	Unknown	Gravel - fine	Polymictic fine grained
AL03	0	45	Unconsolidated	Gravel med-coarse	Polymictic coarse grained
AL03	45	140	Unconsolidated	Gravel med-coarse	Polymictic medium grained
AL03	140	240	Unconsolidated	Gravel med-coarse	Polymictic coarse grained
AL03	240	460	Unknown	Gravel - fine	Polymictic fine grained
AL03	460	465	Unknown	Mixed clay-gravel	Orange-brown puggy clay with minor gravel
AL03	465	505	Unknown	Gravel - fine	Polymictic fine grained
AL03	505	525	Siebert	Mixed clay-gravel	Blue-green-grey clay with fine gravel
AL03	525	560	Siebert	Claystone	Blue-green-grey to creamy grey claystone
AL03	560	580	Siebert	Mixed clay-gravel	Blue-green-grey clay with fine gravel
AL01	0	225	Unconsolidated	Gravel med-coarse	Pebbly, rounded to angular and polymictic
AL01	225	235	Unconsolidated	Gravel - fine	Rounded to angular and polymictic
AL01	235	275	Siebert	Mixed clay-gravel	Variable light orange brown clay content
AL01	275	370	Siebert	Claystone	Tan to light olive to Bluey green claystone
AL01	370	385	Siebert	Mixed clay-gravel	Bluey green claystone in part
AL01	385	395	Siebert	Claystone	Bluey green claystone
AL01	395	405	Siebert	Mixed clay-gravel	Bluey green claystone in part
AL01	405	445	Siebert	Claystone	Bluey green claystone
AL01	445	475	Siebert	Mixed clay-gravel	Bluey green claystone in part
AL01	475	595	Siebert	Claystone	Blue-green to Dark grey green claystone