

THICK LITHIUM CLAYSTONE HOST-ROCKS INTERSECTED AT ALTAIR, USA

Drilling hits wide zones of Siebert formation, a key regional host rock for claystone-hosted lithium deposits



Key Highlights

- **109.7m (360ft) of prospective Siebert formation claystone intersected in the first Altair Project drill hole, AL01.**
- **59.4m (195ft) of Siebert formation claystone intersected in Polaris redrill hole PL04A**
- **The Siebert formation hosts large claystone lithium deposits in the region, including:**
 - **American Battery Technology Corporation's (OTCMKTS: ABML) 15.8Mt Lithium Carbonate Equivalent (LCE) Inferred category Tonopah Flats Lithium Clay Deposit¹**
 - **American Lithium Corporation's (TSX.V: LI) 9.79Mt LCE Measured and Indicated TLC Lithium Project²**
- **Samples to be dispatched shortly for assay at ALS Laboratories Reno, with results expected by early to mid-September.**

Astute Metals NL (ASX: ASE) ("ASE", "Astute" or "the Company") is pleased to advise of continued success in its maiden lithium drilling program in Nevada, USA with a thick 109.7m intersection of prospective Siebert Formation claystone – the main prospective host rock for lithium claystone deposits in the region – in its first drill-hole at the Altair Project, and a thicker intersection of claystone at Polaris hole PL04A following a successful re-drill of this hole.

Astute's Executive Chairman, Tony Leibowitz, said:

"Our lithium exploration strategy in North America is beginning to deliver some exciting results, with wide intercepts of the prospective claystone host rocks in the first hole at Altair and the re-drilled hole at Polaris. This is exactly what we wanted to see in the drilling, and provides significant encouragement that our exploration strategy in this highly sought-after district is firmly on track. We look forward to assays and further results from the drilling."

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 and Polaris Projects were 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.

The Company embarked on its maiden scout drill campaign in late April 2023, exploring for lithium mineralisation within the Siebert formation claystone under alluvial (gravel) cover at the two projects.

Initial drilling was successful, confirming the presence of lithium-bearing claystone at Polaris, before mechanical drill issues resulted in a drilling hiatus³. Drilling re-commenced in late June, with the dual objectives of executing a re-drill strategy at Polaris to drill below strong lithium anomalism encountered in the initial drilling and to complete a maiden drilling program at Altair³.

Drill Results

Since the re-commencement of drilling, the Company has completed its first drill hole at the Altair Project and completed a re-drill of Polaris hole PL04.

Drill hole AL01 intersected 109.7m (360ft) of Siebert formation, including a thick continuous zone of blue-green claystone and clayey gravels, from 71.6 –181.4m (end-of-hole) (235–595ft). This is the thickest intersection of Siebert formation encountered to date by the Company in Nevada.

The re-drill strategy at Polaris has seen drill hole PL04A intersect 59.5m (195ft) of Siebert formation, a significant extension beyond the original PL04 intersection of 27.4m, which ended in low-grade lithium mineralisation of 3.05m (10 feet) grading 140.8ppm lithium³.

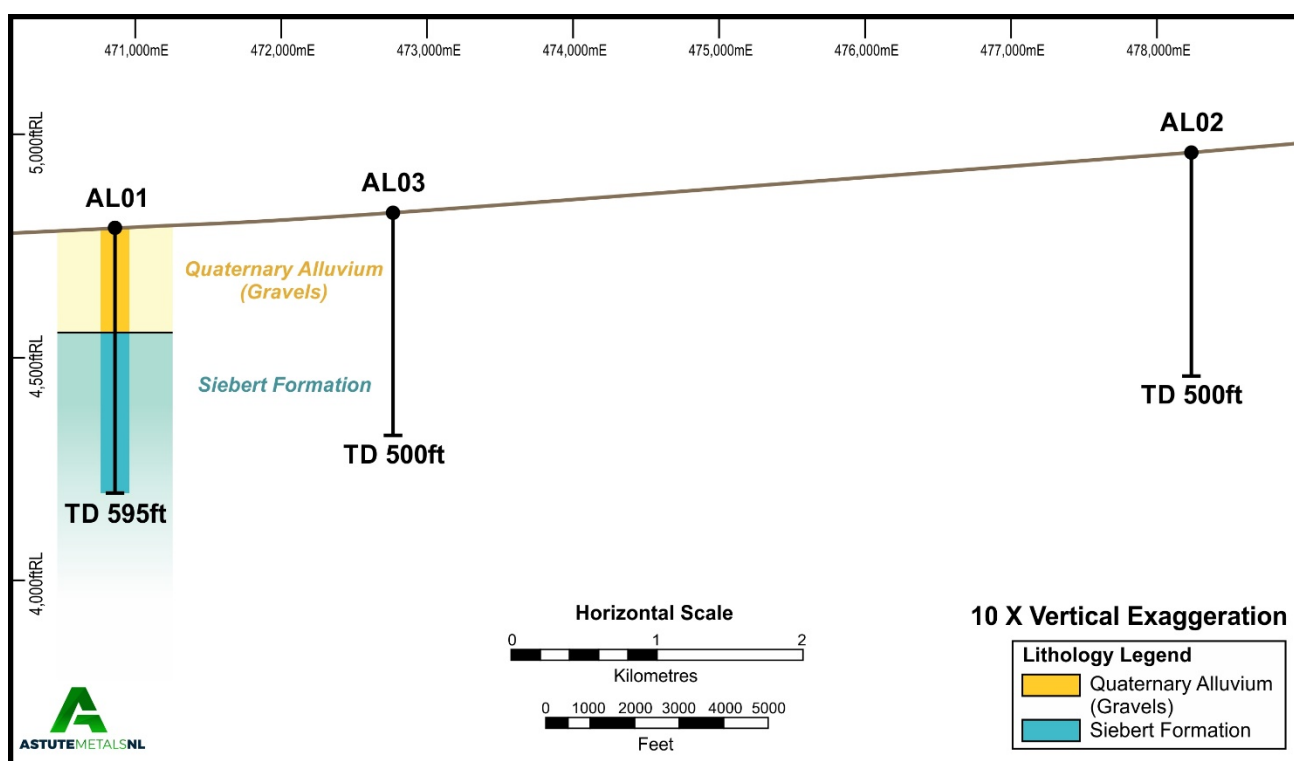


Figure 1. Schematic east-west cross-section of AL01 with remaining Altair planned holes

Interpretation

The thick intersection of Siebert formation at Altair confirms the presence of the prospective lithium host rocks at the project, which has excellent potential for lithium mineralisation.

The Siebert Formation is the local name for lacustrine (lake) sedimentary rocks mapped across parts of Nevada. The formation is known to host two of the largest lithium resources in the United States – the 15.8Mt LCE Tonopah Flats deposit¹ and the 9.79Mt LCE TLC Lithium Project².

The deepening of the Claystone intersection in PL04A was designed to test for higher-grade lithium mineralisation beyond the original PL04 intersection of 3.05m (10 feet) grading 140.8ppm lithium at end-of-hole, given the general increase in lithium grade observed toward the end of the hole.

The successful re-drill has significantly extended the claystone encountered in PL04A, highlighting the significant potential in the project area. Furthermore, all drill holes at Polaris and Altair have ended in Siebert formation claystones, indicating further potential beyond the extent of current drilling.



Figure 2. Chip tray samples at 5-foot (Approx. 1.5m) depth intervals from Altair drill hole AL01

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-dominant lithology intersected in drilling is interpreted to be 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 select parts of the intervals that have intersected the interpreted Siebert formation will shortly be dispatched to a third-party Laboratory for analysis, with results expected by early to mid-September.

Next Steps

Samples collected from Altair hole AL01, along with those from the Polaris hole re-drill PL04A, will be dispatched to ALS Laboratories in Reno for analysis, with results expected by mid-September.

Due to the challenging ground conditions encountered during drilling of the initial sites at Polaris and Altair, the Company has decided to demobilise the rig from site and return with a higher-powered rig to drill the remaining holes at Altair. The Company has had initial discussions with the current drill contractor, who has availability for a higher-powered rig in October 2023.

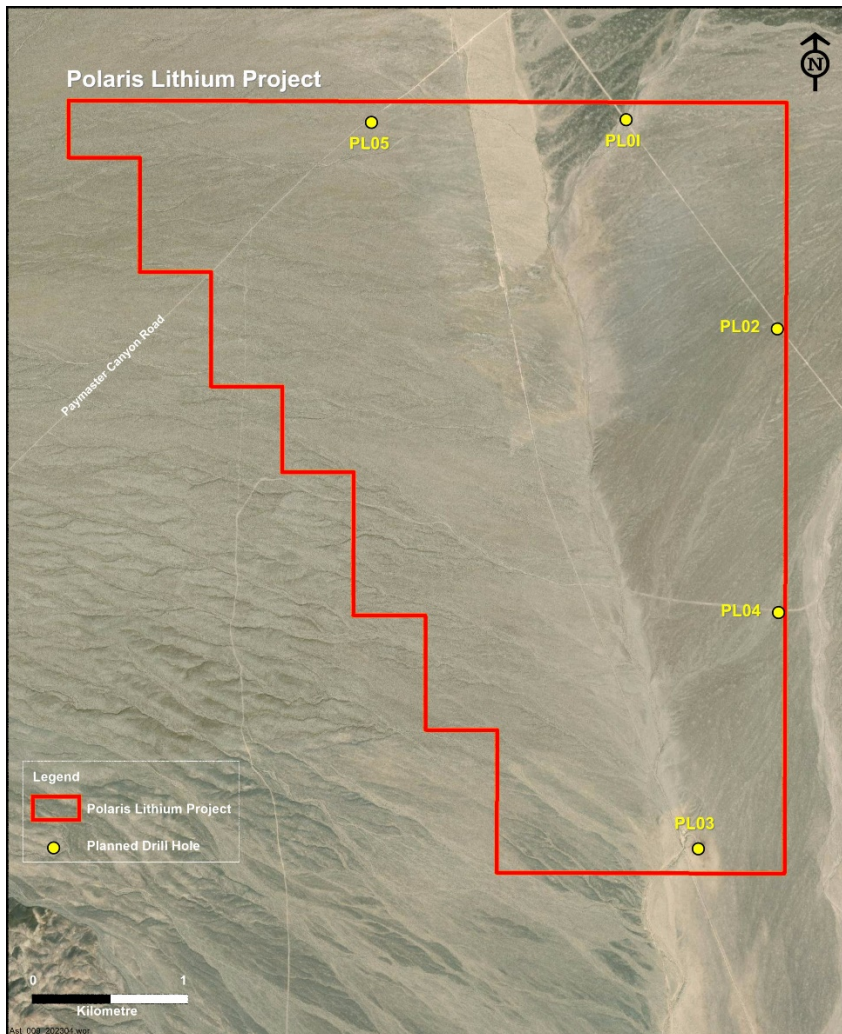


Figure 3. Polaris project drill hole location plan (PL04A located at site PL04)

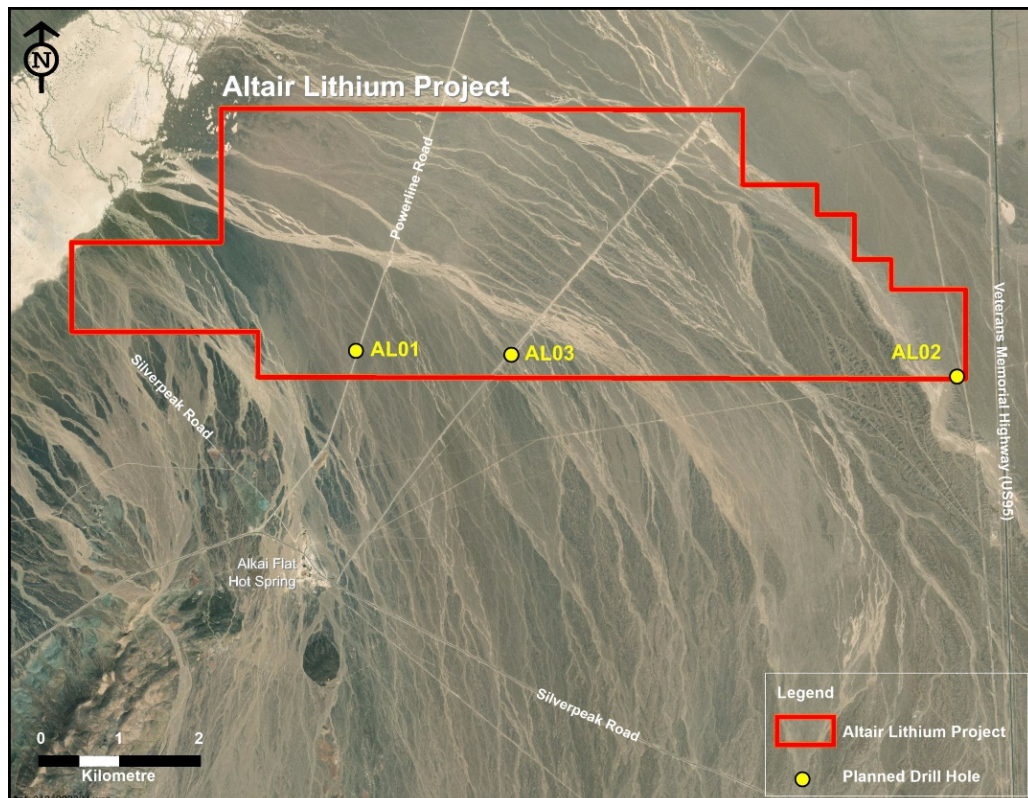


Figure 4. Altair Project drill hole location plan

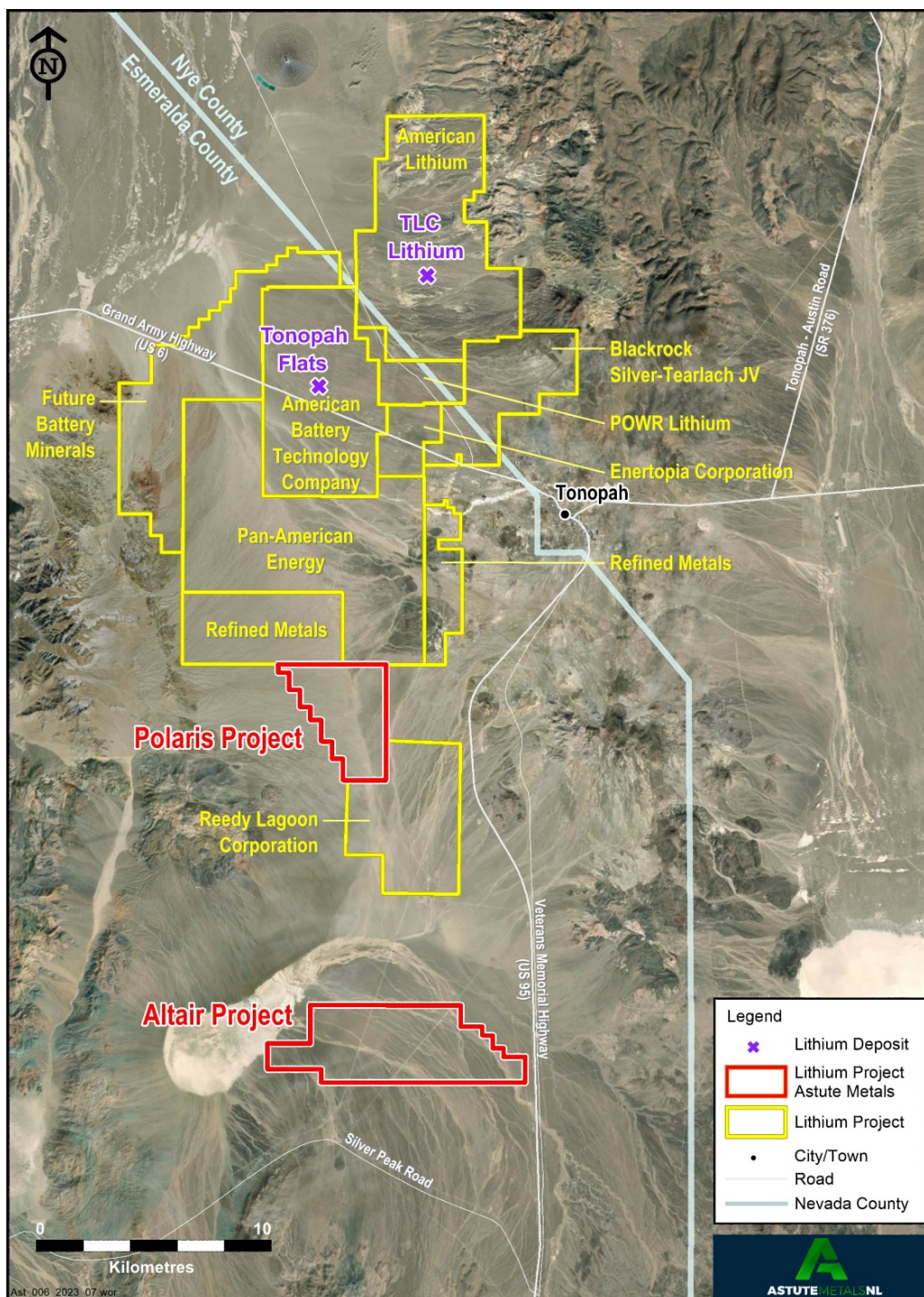


Figure 5. Location of Polaris and Altair Projects, lithium deposits and exploration projects

| Hole ID | Easting | Northing | Depth | Comments |
|---------|---------|----------|----------------|-------------------------------|
| AL01 | 470859 | 4189179 | 181.4m (595ft) | |
| PL04A | 472387 | 4203387 | 189.0m (620ft) | Re-drill of PL04 ³ |

Table 1. Drill site locations

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: ARO 27 June 2023 'Strong Lithium anomalism in initial Nevada Assays as drilling resumes'

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>4.5" tri-cone (PL04A) and 4 3/4" reverse circulation (AL01) drilling was undertaken for drill sample collection. Samples were collected on a 5-foot basis in calico bags.</p> <p>Nominal small drill sample was collected for chip tray and sandwich-sized ziplock bags, with all remaining sample collected in calico bag for despatch to external laboratory</p> <p>Samples were air dried on elevated grid mesh until practical to transport</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> | <p>4.5" tri-cone (PL04A) and 4 3/4" reverse circulation (AL01) drilling methods employed. Water was injected to assist with transport of sample from bit to surface, as required.</p> <p>Drilling was unable to be completed to desired depth in some holes as a function of poor ground conditions</p> |
| 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> | <p>Sample recovery established by dry sample weights undertaken by independent laboratory prior to sample preparation and analysis</p> <p>Challenging ground conditions arising from the drilling of quaternary alluvial and soft claystones did result in poor recovery in some instances.</p> <p>Instances of poor recovery are not expected to materially impact interpretation of results</p> |
| 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> | <p>Drill cuttings for entire hole logged for lithology by contract geologist and company geologists</p> <p>Logging is qualitative</p> <p>Photography of material intersections of claystone taken of relevant chip trays</p> <p>See Appendix 2 for preliminary lithology logging</p> |

| 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> | N/A No sample assays reported |
| 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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p> | No new sample assays reported. Previously reported assay results referenced in footnotes of this announcement |
| 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), 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</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>Drill collar locations determined using handheld GPS with location reported in NAD83 UTM Zone 11. Expected hole location accuracy of +/- 10m</p> <p>No downhole surveys conducted on vertical holes</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> | <p>Drill spacing is appropriate for early exploration purposes</p> <p>5-foot sample interval widely adopted as standard practice in air drilling in the USA.</p> |
| 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> | <p>Claystone beds are regionally sub-horizontal with shallow dip of <math>< 5^\circ</math> although locally this may vary</p> |
| Sample security | <p>The measures taken to ensure sample security.</p> | <p>Samples delivered from the drill site to Freight agent by Company staff/contractors for delivery to external laboratory</p> |
| Audits or reviews | <p>The results of any audits or reviews of sampling techniques and data.</p> | <p>Not applicable</p> |



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>Polaris and Altair Claims 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 lithium exploration conducted on Polaris or Altair areas.</p> <p>Exploration conducted in the region 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"> ◦ 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> | <p>Drillhole locations and drilled depths are tabulated in body report</p> <p>All holes drilled vertically</p> |
| 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> | N/A |

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> | Insufficient information available due to early exploration status |
| 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> | Drill results arising from the current campaign will dictate whether further work is warranted at the Polaris and Altair project areas |

APPENDIX 2 – Polaris Aircore Drilling Preliminary Lithology Logging



| Hole ID | From | To | Rock Formation | Lithology | Comments |
|---------|------|-----|----------------|---------------|--|
| AL01 | 0 | 235 | Unconsolidated | Alluvium | Pebbly, rounded to angular and polymictic |
| AL01 | 235 | 275 | Siebert | Clayey Gravel | Variable light orange-brown clay content |
| AL01 | 275 | 335 | Siebert | Claystone | Tan claystone with minor gravel |
| AL01 | 335 | 350 | Siebert | Claystone | Light olive brown claystone |
| AL01 | 350 | 370 | Siebert | Claystone | Bluey green claystone |
| AL01 | 370 | 385 | Siebert | Clayey Gravel | Bluey green claystone in part |
| AL01 | 385 | 395 | Siebert | Claystone | Bluey green claystone with gravel |
| AL01 | 395 | 405 | Siebert | Clayey Gravel | Bluey green claystone in part |
| AL01 | 405 | 445 | Siebert | Claystone | Bluey green claystone with gravel |
| AL01 | 445 | 475 | Siebert | Clayey Gravel | Bluey green claystone in part |
| AL01 | 475 | 490 | Siebert | Claystone | Bluey green claystone with minor gravel |
| AL01 | 490 | 500 | Siebert | Claystone | Bluey green claystone |
| AL01 | 500 | 535 | Siebert | Claystone | Bluey green claystone with minor gravel |
| AL01 | 535 | 585 | Siebert | Claystone | Light bluey green claystone |
| AL01 | 585 | 595 | Siebert | Claystone | Dark grey green claystone |
| PL04A | 0 | 425 | Unconsolidated | Alluvium | Pebbly to sandy yellowish brown and polymictic |
| PL04A | 425 | 430 | Siebert | Claystone | Olive brown silty claystone |
| PL04A | 430 | 485 | Siebert | Gravel | Gravel, brown. Clayey in part |
| PL04A | 485 | 500 | Siebert | Claystone | Olive brown silty to sandy claystone |
| PL04A | 500 | 510 | Siebert | Claystone | Medium brown |
| PL04A | 510 | 520 | Siebert | Claystone | Light tan brown |
| PL04A | 520 | 540 | Siebert | Claystone | Bluey green claystone |
| PL04A | 540 | 545 | Siebert | Claystone | Olive brown |
| PL04A | 545 | 555 | Siebert | Clayey Gravel | Medium olive brown. Clayey in part |
| PL04A | 555 | 560 | Siebert | Claystone | Olive brown |
| PL04A | 560 | 585 | Siebert | Gravel | Grey, tan, clayey in part |
| PL04A | 585 | 595 | Siebert | Claystone | Olive brown |
| PL04A | 595 | 620 | Siebert | Gravel | Light brown. Clayey in part |