

## PIEDMONT FOCUSED ON INCREASED SUSTAINABILITY WITH 40% INCREASE IN QUARTZ, FELDSPAR, AND MICA MINERAL RESOURCES

- Mineral Resource estimates have increased by 40% for quartz (11.5Mt), feldspar (17.8Mt), and mica (1.6Mt)
- Piedmont has added John Walker, former CEO of The Quartz Corp, as a strategic advisor to the Company
- Market analysis indicates far greater potential demand for Piedmont industrial mineral products than prior Company estimates
- The Company is advanced in discussions with prospective regional customers and strategic partners in the solar glass, engineered quartz, ceramic tile, and other industrial minerals markets
- Expanded quartz, feldspar, and mica production will feature in the Company's upcoming technical studies

Piedmont Lithium Inc. ("Piedmont" or "Company") is pleased to announce an updated Mineral Resource estimate for industrial mineral products quartz, feldspar, and mica. The estimate is based on the lithium Mineral Resource previously reported on April 8, 2021 (39.2Mt @ 1.09 Li<sub>2</sub>O%) for spodumene bearing pegmatites at the Company's flagship Piedmont Carolina Lithium Project ("Project") in North Carolina, USA.

**Table 1: Mineral Resource Estimates for Industrial Minerals – Piedmont Carolina Lithium Project**

Category	Tonnes (Mt)	Quartz		Feldspar		Mica	
		Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)
Indicated	21.6	29.4	6.34	45.0	9.69	4.2	0.90
Inferred	17.6	29.3	5.16	45.9	8.08	4.1	0.73
<b>Total</b>	<b>39.2</b>	<b>29.4</b>	<b>11.50</b>	<b>45.4</b>	<b>17.77</b>	<b>4.2</b>	<b>1.63</b>

To help advance the marketing of these mineral products, John Walker joined the Piedmont team last fall as a Strategic Consultant. John has extensive experience in the quartz and feldspar markets having worked with Imerys for more than twenty years and spending another eight years with The Quartz Corp as CEO. John has provided invaluable input on market dynamics, desired product quality and other customer criteria, allowing Piedmont to develop a robust business model for marketing these materials.

Keith D. Phillips, President and Chief Executive Officer, commented: *"Piedmont continues to find increased value in our industrial mineral products quartz, feldspar, and mica. Our location in close proximity to potential customers helps advance our goal of becoming one of the world's most sustainable lithium manufacturing businesses. Placing more of our valuable resources into the market creates circular economy opportunities through waste reduction while providing substantial credits towards our cost of lithium hydroxide production. Our upcoming technical studies are expected to demonstrate both the environmental and economic benefits that our team is creating through their ongoing efforts to make beneficial use of every part of our ore body."*

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## Technical Discussion

The quartz, feldspar, and mica Mineral Resource estimates (“MRE”), reported in Table 1, include an update for the Core property and an initial Mineral Resource estimate for the Central and Huffstetler properties. The details of the three MREs are summarized in Table 2. The mineral percentages for the MRE were derived from a normative mineralogical calculation using XRF major oxide analysis for spodumene bearing pegmatites within the current lithium Mineral Resource. Mineralogical results are similar for each of the Piedmont Carolina Lithium properties which illustrates the mineralogical consistency of the Carolina Tin-Spodumene Belt (“TSB”).

Category	Deposit	Tonnes (Mt)	Li <sub>2</sub> O		Quartz		Feldspar		Mica	
			Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)
Indicated	Core	19.08	1.10	0.210	29.52	5.63	45.00	8.58	4.30	0.82
	Central	2.47	1.30	0.030	28.79	0.71	45.16	1.12	3.24	0.08
	Huffstetler	-	-	-	-	-	-	-	-	-
	<b>Total</b>	<b>21.55</b>	<b>1.12</b>	<b>0.241</b>	<b>29.42</b>	<b>6.34</b>	<b>44.97</b>	<b>9.69</b>	<b>4.18</b>	<b>0.90</b>
Inferred	Core	12.61	1.03	0.130	29.27	3.69	45.80	5.78	4.28	0.54
	Central	2.69	1.10	0.030	29.99	0.81	43.88	1.18	4.08	0.11
	Huffstetler	2.31	0.91	0.021	28.82	0.67	48.60	1.12	3.24	0.08
	<b>Total</b>	<b>17.61</b>	<b>1.03</b>	<b>0.181</b>	<b>29.31</b>	<b>5.16</b>	<b>45.90</b>	<b>8.08</b>	<b>4.12</b>	<b>0.73</b>
<b>MRE Total</b>		<b>39.16</b>	<b>1.09</b>	<b>0.422</b>	<b>29.37</b>	<b>11.50</b>	<b>45.38</b>	<b>17.77</b>	<b>4.16</b>	<b>1.63</b>

Central and Huffstetler properties are within one mile of the Core property along the trend of the TSB (Figure 1). Infill drilling continues on the Core property. These results will be used to update lithium and by-product Mineral Resources prior to completion of a Definitive Feasibility Study currently scheduled for September 2021.



**Figure 1 – Piedmont Carolina Lithium Project Mineral Resource location map showing updated MRE and resource constraining shells**

## Summary of Resource Estimate and Reporting Criteria

The resource has been prepared in compliance with JORC Code 2012 Edition and the ASX Listing Rules. The Company has included in Annexure A, the Table Checklist of Assessment and Reporting Criteria for the Piedmont Carolina Lithium Project as prescribed by the JORC Code 2012 Edition and the ASX Listing Rules.

The following is a summary of the pertinent information used in the MRE with the full details provided in Table 1 included as Appendix 1: JORC Table 1.

### Geology and Geological Interpretation

Regionally, the Carolina Tin-Spodumene belt extends for 40 kilometers along the litho tectonic boundary between the Inner Piedmont and Kings Mountain belts. The mineralized pegmatites are thought to be concurrent and cross-cutting dike swarms extending from the Cherryville granite, as the dikes progressed further from their sources, they became increasingly enriched in incompatible elements such as lithium (Li) and tin (Sn). The dikes are considered to be unzoned.

On the property scale, spodumene pegmatites are hosted in a fine to medium grained, weakly to moderately foliated amphibolites and metasediments. The spodumene pegmatites range from fine grained (aplite) to very coarse-grained pegmatite with primary mineralogy consisting of spodumene, quartz, plagioclase, potassium-feldspar and muscovite.

Primary mineralogy and compositional averages for the modelled resource pegmatites are summarized in Table 2.

Table 3: Mineralogy and Compositional Averages for the Modelled Resource Pegmatites			
Mineral	Compositional Average (%)		
	Core	Central	Huffstetler
Spodumene	13.6	16.7	11.8
Quartz	29.4	29.4	28.8
Albite (feldspar)	35.7	35.6	36.4
K-spar (feldspar)	9.7	8.9	12.2
Muscovite (mica)	4.3	3.7	3.2
Biotite	1.9	1.6	3.4
Residual	5.5	4.1	4.1

### Drilling and Sampling Techniques

These resources are an update to the initial by-product Mineral Resource estimates reported in August 2019 in which the resource was informed by 327 drillholes at the Core property. The current resource estimate is now informed by a total of 465 drillholes. Table 4 shows the allocation of drillholes per property.

Table 4: Drill Hole Summary for the Mineral Resource Estimate Update			
Property	Drill Type	Number of Holes	Number of Holes with XRF data
Core	Diamond and Rotary Sonic Core	415	303
Central	Diamond Core	36	22
Huffstetler	Diamond Core	14	14

All diamond drill holes were collared with HQ and were transitioned to NQ once non-weathered and unoxidized bedrock was encountered. Drill core was recovered from surface.

Oriented core was collected on select drill holes using the REFLEX ACT III tool by a qualified geologist at the drill rig. This data was highly beneficial in the interpretation of the pegmatite dikes.

The drill spacing is approximately 40 to 80 meters along strike and down dip. This spacing is sufficient to establish continuity in geology and grade for this pegmatite system.

Drill collars were located with the differential global positioning system (DGPS) with the Trimble Geo 7 unit which resulted in accuracies <1 meter. All coordinates were collected in State Plane and re-projected to Nad83 zone17 in which they are reported.

Down hole surveying was performed on each hole using a REFLEX EZ-Trac multi-shot instrument. Readings were taken approx. every 15 meters (50 feet) and recorded depth, azimuth, and inclination. All holes were geologically and geotechnically logged. All holes were photographed prior to sampling. Sampled zones were subsequently photographed a second time after the samples had been marked.

The core was cut in half with a diamond saw with one half submitted as the sample and the other half retained for reference. Standard sample intervals were a minimum of 0.35 m and a maximum of 1.5 m for HQ or NQ drill core, taking into account lithological boundaries (i.e. sample to, and not across, major contacts). A CRM or coarse blank was included at the rate of one for every 20 drill core samples (i.e. 5%). Sampling precision is monitored by selecting a sample interval likely to be mineralized and splitting the sample into two ¼ core duplicate samples over the same sample interval. These samples are consecutively numbered after the primary sample and recorded in the sample database as “field duplicates” and the primary sample number recorded. Field duplicates were collected at the rate of 1 in 20 samples when sampling mineralized drill core intervals.

### ***Sample Analysis Method***

Normative mineralogy was calculated from total fusion X-ray fluorescence (XRF) major element data using a least squares method (MINSQ – Herrmann, W. and Berry, R.F., 2002, *Geochemistry: Exploration, Environment, Analysis*, volume 2, pp. 361-368). The normative calculations were validated against and corrected where necessary using X-ray diffraction (XRD) Rietveld semi-quantitative mineralogical data from 38 sample pulps selected to represent a range of chemical compositions and mineralogy, as well as 3 QEMSCAN analyses of composite samples prepared for metallurgical test work.

### ***Resource Estimation Methodology***

Lithological and structural features were defined based upon geological knowledge of the deposit derived from drill core logs and geological observations on surface. Models of pegmatite dikes, weathering profiles and bulk densities generated for the previously released Mineral Resource Update Study announced on April 8, 2021 were used for this study.

Rotated block models were constructed in Micromine® that encompass all modelled dikes using parent cell sizes of 6 m (E) by 12 to 18 m (N) by 6 to 18m (Z). The drill hole files were flagged by the pegmatite and weathering domains they intersected. Statistical analysis of the domained data was undertaken in SuperVisor®. Samples were regularized to 1 meter composite lengths. Regularized weight percent mineral grades within the pegmatite model were analyzed to confirm the suitability of the Ordinary Kriging method also used for the previously released Global Mineral Resource estimate study announced on April 8, 2021. For each modelled pegmatite, regularized compositional grades for spodumene, quartz, albite, K-spar and muscovite were interpolated into the corresponding pegmatite block model along with grades for biotite and other gangue minerals. Albite and K-spar grade estimates are summed to generate a compositional grade estimate for feldspar by-product.

Block grade interpolation was validated by means of swath plots, comparison of sample and block model mineral grade averages and correlation coefficients, and by overlapping mineral grade distribution charts for sample and block model data. Cross sections of the block model with drill hole data superimposed were also reviewed.

### ***Classification Criteria***

Resource classification parameters are based on the validity and robustness of input data and the estimator’s judgment with respect to the proximity of resource blocks to sample locations and confidence with respect to the geological continuity of the pegmatite interpretations and grade estimates.

All blocks captured in pegmatite dike interpretation wireframes below the topography surface are classified as Inferred. Indicated classification boundaries define regions of blocks that, overall, meet the following criteria: Within major pegmatite dikes that are informed by at least two drill holes within a range of approximately 25 meters to the nearest drill hole in the along strike and down dip directions.

No Measured category resources are estimated.

### ***Cut-Off Grade, Mining and Metallurgical Methods and Parameters***

The economic extraction of by-product minerals is contingent on the economic extraction of lithium mineral resources at the Project. Accordingly, the by-product Mineral Resource Estimate is reported at a 0.4% Li<sub>2</sub>O cut-off grade, in line with lithium cut off grades utilized at comparable deposits.

Compositional grade and tonnage estimates for by-product mineral resources are presented in Table 3.

The depth, geometry, and grade of pegmatites at the property make them amenable to exploitation by open cut mining methods. The Core resource model is constrained by a conceptual pit shell derived from a Whittle optimization using estimated block value and mining parameters appropriate for determining reasonable prospects of economic extraction. These include: maximum pit slope of 50° and strip ratio of 12, mining cost of US\$2.25/t, spodumene concentration cost of US\$25/t, a processing cost of US\$2,616/t LiOH, a commodity price equivalent to US\$12,910/t LiOH and with appropriate recovery and dilution factors. Material falling outside of this shell is considered to not meet reasonable prospects for eventual economic extraction.

Conceptual shells for Central and Huffstetler resource models, developed using the above parameters, extended to the base of the resource models and beyond the modeled strike extent of the resource model where the deposits are open. Accordingly, the entire Central and Huffstetler resource models are considered to have reasonable prospects of eventual economic extraction.

Reasonable prospects for metallurgical recovery of spodumene and by-product minerals are supported by the results of the variability and composite sample test work undertaken at SGS laboratories in Lakefield, Ontario and previously announced on May 13, 2020. Bulk samples of the quartz, feldspar and mica co-products from the Project have been evaluated for attributes such as product size distribution, chemical composition, purity, and color. Test work results demonstrate that by-products have specifications that are marketable to prospective regional customers and strategic partners in the solar glass, engineered quartz, ceramic tile, and other industrial minerals markets.

### ***Future Exploration***

Currently, Piedmont has five drill rigs conducting infill and exploration drilling at the Core Property. Piedmont may conduct additional drilling on the Huffstetler and Central properties in 2021. The results and the MRE's reported in this press release will underpin the Scoping Study update targeted for May 2021. A subsequent resource update is scheduled upon completion of the infill drilling, these will inform the Definitive Feasibility Study scheduled for September 2021.



## About Piedmont Lithium

Piedmont Lithium (Nasdaq:PLL; ASX:PLL) is developing a world-class integrated lithium business in the United States, enabling the transition to a net zero world and the creation of a clean energy economy in America. Our location in the renowned Carolina Tin Spodumene Belt of North Carolina, the cradle of the lithium industry, positions us to be one of the world's lowest cost producers of lithium hydroxide, and the most strategically located to serve the fast-growing US electric vehicle supply chain. The unique geographic proximity of our resources, production operations and prospective customers places us on the path to be among the most sustainable producers of lithium hydroxide in the world and should allow Piedmont to play a pivotal role in supporting America's move to the electrification of transportation and energy storage. For more information, visit [www.piedmontlithium.com](http://www.piedmontlithium.com).

## Forward Looking Statements

*This announcement may include forward-looking statements. These forward-looking statements are based on Piedmont's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Piedmont, which could cause actual results to differ materially from such statements. Piedmont makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of that announcement.*

## Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Resources

*The information contained herein has been prepared in accordance with the requirements of the securities laws in effect in Australia, which differ from the requirements of United States securities laws. The terms "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are Australian mining terms defined in accordance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Comparable terms are now also defined by the U.S. Securities and Exchange Commission ("SEC") in its newly adopted Modernization of Property Disclosures for Mining Registrants as promulgated in its S-K 1300 standards. While the guidelines for reporting mineral resources, including subcategories of measured, indicated, and inferred resources, are largely similar for JORC and S-K 1300 standards, documentation is ongoing with respect to the S-K 1300 Technical Report Summary template to formally categorize Piedmont's mineral holdings as both JORC and S-K 1300 compatible. While the competent persons responsible for this announcement do not foresee any challenges in categorizing the resources delineated in this announcement as S-K 1300 compliant, information contained herein that describes Piedmont's mineral deposits is not fully comparable to similar information made public by U.S. companies subject to reporting and disclosure requirements under the U.S. federal securities laws and the rules and regulations thereunder. U.S. investors are urged to consider Piedmont's disclosure in its SEC filings, copies of which may be obtained from Piedmont or from the EDGAR system on the SEC's website at <http://www.sec.gov/>.*

## Competent Persons Statement

*The information in this announcement that relates to Exploration Results is based on, and fairly represents, information compiled or reviewed by Mr. Lamont Leatherman, a Competent Person who is a Registered Member of the 'Society for Mining, Metallurgy and Exploration', a 'Recognized Professional Organization' (RPO). Mr. Leatherman is an employee of the Company. Mr. Leatherman has sufficient experience that is relevant to the style of mineralization 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. Leatherman 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 Exploration Targets and Mineral Resources is based on, and fairly represents, information compiled or reviewed by Mr. Leon McGarry, a Competent Person who is a Professional Geoscientist (P.Geo.) and registered member of 'Professional Geoscientists Ontario' (PGO no. 2348), a 'Recognized Professional Organization' (RPO). Mr. McGarry is a Principal Resource Geologist and full-time employee at McGarry Geoconsulting Corp. Mr. McGarry has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves'. Mr. McGarry consents to the inclusion in this report of the results of the matters based on his information in the form and context in which it appears.*

This announcement has been authorized for release by the Company's CEO, Mr. Keith Phillips

## Appendix 1: JORC Table 1 Checklist of Assessment and Reporting Criteria

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>&gt; 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 downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>&gt; Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>&gt; 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 (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.</li> </ul>	<p>All drill results reported are from diamond core samples or rotary sonic drill core. The core was split at an orientation not influenced by the distribution of mineralization within the drill core (i.e. bisecting mineralized veins or cut perpendicular to a fabric in the rock that is independent of mineralization, such as foliation). Diamond and Rotary Sonic drilling provided continuous core which allowed continuous sampling of mineralized zones. The core sample intervals were a minimum of 0.35m and a maximum of 1.5m for HQ or NQ drill core (except in saprolitic areas of poor recovery where sample intervals may exceed 1.5m in length). Sampling took into account lithological boundaries (i.e. sample was to, and not across, major contacts).</p> <p>Standards and blanks were inserted into the sample stream to assess the accuracy, precision and methodology of the external laboratories used. In addition, field duplicate samples were inserted to assess the variability of the mineralization. The laboratories undertake their own duplicate sampling as part of their internal QA/QC processes. Examination of the QA/QC sample data indicates satisfactory performance of field sampling protocols and assay laboratories providing acceptable levels of precision and accuracy.</p>
Drilling techniques	<ul style="list-style-type: none"> <li>&gt; 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.).</li> </ul>	<p>All diamond drill holes were collared with HQ and were transitioned to NQ once non-weathered and unoxidized bedrock was encountered. Drill core was recovered from surface.</p> <p>Rotary Sonic core was only drilled in the saprolitic zones. Drill core was recovered from surface. Holes were terminated in the saprolitic zone or once unoxidized rock was encountered</p> <p>Oriented core was collected on selected drill holes using the REFLEX ACT III tool by a qualified geologist at the drill rig. The orientation data is currently being evaluated.</p>
Drill sample recovery	<ul style="list-style-type: none"> <li>&gt; Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>&gt; Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>&gt; 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.</li> </ul>	<p>The diamond core was transported from the drill site to the logging facility in covered boxes with the utmost care. Once at the logging facility, the following procedures were carried out on the core:</p> <ol style="list-style-type: none"> <li>1. Re-aligning the broken core in its original position as closely as possible.</li> <li>2. The length of recovered core was measured, and meter marks clearly placed on the core to indicate depth to the nearest centimeter.</li> <li>3. The length of core recovered was used to determine the core recovery, which is the length of core recovered divided by the interval drilled (as indicated by the footage marks which was converted to meter marks), expressed as a percentage. This data was recorded in the database. The core was photographed wet before logged.</li> <li>4. The core was photographed again immediately before sampling with the sample numbers visible.</li> </ol> <p>For the Sonic core, recovery, geologic logging and sampling was conducted at the drill site by a Piedmont geologist.</p> <p>Sample recovery was consistently good except for zones within the oxidized clay and saprolite zones. These zones were generally within the top 20m of the hole. No relationship is recognized between recovery and grade. The diamond drill holes were designed to intersect the targeted pegmatite below the oxidized zone where the sonic drilling was targeting pegmatites in the saprolitic zone.</p>
Logging	<ul style="list-style-type: none"> <li>&gt; 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.</li> <li>&gt; Whether logging is qualitative or quantitative in nature. Core (or costean,</li> </ul>	<p>Geologically, data was collected in detail, sufficient to aid in Mineral Resource estimation.</p> <p>Core logging consisted of marking the core, describing lithologies, geologic features, percentage of spodumene and structural features measured to core axis.</p> <p>The core was photographed wet before logging and again immediately before sampling with the sample numbers visible.</p>

Criteria	JORC Code explanation	Commentary																				
	<i>channel, etc.) photography.</i> <i>&gt; The total length and percentage of the relevant intersections logged.</i>	All the core from the form the 107 holes reported was logged.																				
Sub-sampling techniques and sample preparation	<i>&gt; If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>&gt; If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> <i>&gt; For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>&gt; Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> <i>&gt; 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.</i> <i>&gt; Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Diamond core was cut in half with a diamond saw. Sonic Core was split with a large knife or machete.  Standard sample intervals were a minimum of 0.35m and a maximum of 1.5m for HQ or NQ drill core, taking into account lithological boundaries (i.e. sample to, and not across, major contacts).  Prior to 2020, the preparation code is CRU21 (crush to 75% of sample <2mm) and PUL45 (pulverize 250g to 85% <75 microns), in 2020 the code was changed to CRU16.  A CRM or coarse blank was included at the rate of one for every 20 drill core samples (i.e. 5%).  Sampling precision is monitored by selecting a sample interval likely to be mineralized and splitting the sample into two ¼ core duplicate samples over the same sample interval. These samples are consecutively numbered after the primary sample and recorded in the sample database as “field duplicates” and the primary sample number recorded. Field duplicates were collected at the rate of 1 in 20 samples when sampling mineralized drill core intervals  Samples were numbered sequentially with no duplicates and no missing numbers. Triple tag books using 9-digit numbers were used, with one tag inserted into the sample bag and one tag stapled or otherwise affixed into the core tray at the interval the sample was collected. Samples were placed inside pre-numbered sample bags with numbers coinciding to the sample tag. Quality control (QC) samples, consisting of certified reference materials (CRMs), were given sample numbers within the sample stream so that they are masked from the laboratory after sample preparation and to avoid any duplication of sample numbers.																				
Quality of assay data and laboratory tests	<i>&gt; The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>&gt; For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> <i>&gt; 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.</i>	All samples were shipped to the SGS laboratory in Lakefield, Ontario or Garson, Ontario  Prior to 2020, the preparation code is CRU21 (crush to 75% of sample <2mm) and PUL45 (pulverize 250g to 85% <75 microns), in 2020 the code was changed to CRU16 and PUL10, respectively.  Prior to 2020, the analysis code for lithium was GE ICP91A, which uses a peroxide fusion with an ICP finish, and has lower and upper detection limits of 0.001 and 50,000 (5%) ppm respectively. In 2020, the code was changed to GE ICP92A50. Accuracy monitoring was achieved through submission and monitoring of certified reference materials (CRMs).  XRF analysis code for major oxides prior to 2020 was GO XRF76V. In 2020 the code was changed to GO_XRF72  Sample numbering and the inclusion of CRMs was the responsibility of the project geologist submitting the samples. A CRM or coarse blank was included at the rate of one for every 20 drill core samples (i.e. 5%).  The CRMs used for this program were supplied by Geostats Pty Ltd of Perth, Western Australia. Details of the CRMs are provided below. A sequence of these CRMs covering a range in Li values and, including blanks, were submitted to the laboratory along with all dispatched samples so as to ensure each run of 100 samples contains the full range of control materials. The CRMs were submitted as “blind” control samples not identifiable by the laboratory.  Details of CRMs used in the drill program (all values ppm): <table><tr><th>CRM</th><th>Manufacturer</th><th>Lithium</th><th>1 Std Dev</th></tr><tr><td>GTA-02</td><td>Geostats</td><td>1814</td><td>50</td></tr><tr><td>GTA-04</td><td>Geostats</td><td>9550</td><td>246</td></tr><tr><td>GTA-08</td><td>Geostats</td><td>1102</td><td>50</td></tr><tr><td>GTA-09</td><td>Geostats</td><td>4837</td><td>174</td></tr></table>  Sampling precision was monitored by selecting a sample interval likely to be mineralized and splitting the sample into two ¼ core duplicate samples over the same sample interval. These samples were consecutively numbered after the primary sample and recorded in the sample database as “field duplicates” and the primary sample number recorded. Field duplicates were collected at the rate of 1 in 20 samples when sampling mineralized drill core intervals. Random sampling precision	CRM	Manufacturer	Lithium	1 Std Dev	GTA-02	Geostats	1814	50	GTA-04	Geostats	9550	246	GTA-08	Geostats	1102	50	GTA-09	Geostats	4837	174
CRM	Manufacturer	Lithium	1 Std Dev																			
GTA-02	Geostats	1814	50																			
GTA-04	Geostats	9550	246																			
GTA-08	Geostats	1102	50																			
GTA-09	Geostats	4837	174																			



Criteria	JORC Code explanation	Commentary
		<p>was monitored by splitting samples at the sample crushing stage (coarse crush duplicate) and at the final sub-sampling stage for analysis (pulp duplicates). The coarse, jaw-crushed, reject material was split into two preparation duplicates, sometimes referred to as second cuts, crusher or preparation duplicates, which were then pulverized and analyzed separately. These duplicate samples were selected randomly by the laboratory. Analytical precision was also monitored using pulp duplicates, sometimes referred to as replicates or repeats. Data from all three types of duplicate analyses was used to constrain sampling variance at different stages of the sampling and preparation process.</p> <p>Examination of the QA/QC sample data indicates satisfactory performance of field sampling protocols and assay laboratories providing acceptable levels of precision and accuracy.</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>&gt; The verification of significant intersections by either independent or alternative company personnel.</li> <li>&gt; The use of twinned holes.</li> <li>&gt; Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>&gt; Discuss any adjustment to assay data.</li> </ul>	<p>Multiple representatives of Piedmont Lithium Inc. have inspected and verified the results.</p> <p>CSA has conducted multiple site visits. Dennis Arne (Managing Director -Principal Consultant) toured the site, facilities and reviewed core logging and sampling workflow as well as Leon McGarry (Senior Resource Geologist). Each provided comments on how to improve our methods and have been addressed. Verification core samples were collected by Leon McGarry.</p> <p>No holes were twinned.</p> <p>Three-meter rods or 10 foot core barrels were used. Li% was converted to Li<sub>2</sub>O by multiplying Li% by 2.153.</p> <p>For by-products, accuracy of the normative mineralogy was monitored using Rietveld semi-quantitative mineralogy for 38 XRD analyses from pulp samples as well as 3 QEMSCAN analyses of composites used for metallurgical test work. Normative estimates for quartz, spodumene, albite and K-feldspar (microcline) have average relative accuracies less than +/- 2 % compared to the QEMSCAN composite data, with muscovite showing a positive relative bias of 11.6 % (i.e. 11.6 % more muscovite in the QEMSCAN results than the normative mineralogy predicts). The normative mineralogical estimates for quartz, spodumene, albite, K-feldspar and muscovite have average relative biases of 1 %, -3.7 %, 11.9 %, 2.9 % and 6.3 %, respectively, compared to the XRD results, excluding XRD mineral estimates of 2 % or less taken to be at or close to the method limit of detection, and following correction of the normative estimates for K-feldspar and muscovite using the XRD data. The QEMSCAN mineralogical data are taken to be more reliable than the XRD data given complications associated with the Rietveld analysis of minerals with a strong preferred orientation, such as muscovite.</p>
Location of data points	<ul style="list-style-type: none"> <li>&gt; 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.</li> <li>&gt; Specification of the grid system used.</li> <li>&gt; Quality and adequacy of topographic control.</li> </ul>	<p>Drill collars were located with the Trimble Geo 7 which resulted in accuracies &lt;1m.</p> <p>All drill hole collar coordinates were collected in State Plane and re-projected to Nad83 zone17 in which they are reported.</p> <p>Drill hole surveying was performed on each hole using a REFLEX EZ-Trac multi-shot instrument. Readings were taken approx. every 15 meters and recorded depth, azimuth, and inclination. In 2020, Piedmont conducted a LIDAR survey for the Project area</p>
Data spacing and distribution	<ul style="list-style-type: none"> <li>&gt; Data spacing for reporting of Exploration Results.</li> <li>&gt; 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.</li> <li>&gt; Whether sample compositing has been applied.</li> </ul>	<p>For selected areas, the drill spacing is approximately 40 to 80 m along strike and down dip. This spacing is sufficient to establish continuity in geology and grade for this pegmatite system.</p> <p>Composite samples are reported in Li<sub>2</sub>O%, this is calculated by multiplying drill length by Li<sub>2</sub>O for each sample; then the weighted averages for multiple samples are totaled and divided by the total drill length for the selected samples</p>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>&gt; Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>&gt; 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.</li> </ul>	<p>The drill holes were designed and oriented with inclinations ranging from -52.4 to -85.8 degrees, to best intersect the pegmatite bodies as close to perpendicularly as possible.</p> <p>Assay results in Appendix 1 are drill lengths and not true thicknesses.</p> <p>All results reported for rock chip samples are from surface outcrop, sub-crop and float blocks. The reported samples are considered as grab samples and do not represent a continuous sample over any width or length of the mineralized system.</p>

Criteria	JORC Code explanation	Commentary
Sample security	> The measures taken to ensure sample security.	Drill core samples and rock chip samples were shipped directly from the core shack by the project geologist in sealed rice bags or similar containers using a reputable transport company with shipment tracking capability so that a chain of custody can be maintained. Each bag was sealed with a security strap with a unique security number. The containers were locked in a shed if they were stored overnight at any point during transit, including at the drill site prior to shipping. The laboratory confirmed the integrity of the rice bag seals upon receipt
Audits or reviews	> The results of any audits or reviews of sampling techniques and data.	CSA Global developed a "Standard Operating Procedures" manual in preparation for the drilling program.  CSA has conducted multiple site visits. Dennis Arne (Managing Director -Principal Consultant) toured the site and facilities as well as Leon McGarry (Senior Resource Geologist). Each provided comments on how to improve our methods and have been addressed. Verification core samples were collected by Leon McGarry.

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>&gt; 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.</li> <li>&gt; 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.</li> </ul>	<p>As of March 31, 2021, the Project comprised approximately 2,667 acres of surface property and associated mineral rights in North Carolina, of which approximately 988 acres are owned, approximately 113 acres are subject to long-term lease, approximately 79 acres are subject to lease-to-own agreements, and approximately 1,487 acres are subject to exclusive option agreements. These exclusive option agreements, upon exercise, allow us to purchase or, in some cases, enter into long-term leases for the surface property and associated mineral rights.</p> <p>There are no known historical sites, wilderness or national parks located within the Project area and there are no known impediments to obtaining a license to operate in this area.</p>
Exploration done by other parties	> Acknowledgment and appraisal of exploration by other parties.	The Project is focused over an area that has been explored for lithium dating back to the 1950's where it was originally explored by Lithium Corporation of America which was subsequently acquired by FMC Corporation. Most recently, North Arrow explored the Project in 2009 and 2010. North Arrow conducted surface sampling, field mapping, a ground magnetic survey and two diamond drilling programs for a total of 19 holes. Piedmont Lithium Inc. has obtained North Arrow's exploration data.
Geology	> Deposit type, geological setting and style of mineralisation.	Spodumene pegmatites, located near the litho tectonic boundary between the Inner Piedmont and Kings Mountain belt. The mineralization is thought to be concurrent and cross-cutting dike swarms extending from the Cherryville granite, as the dikes progressed further from their sources, they became increasingly enriched in incompatible elements such as Li, tin (Sn). The dikes are considered to be unzoned.
Drill hole Information	<ul style="list-style-type: none"> <li>&gt; 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:</li> <li>&gt; easting and northing of the drill hole collar</li> <li>&gt; elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>&gt; dip and azimuth of the hole</li> <li>&gt; down hole length and interception depth</li> <li>&gt; hole length.</li> <li>&gt; 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.</li> </ul>	Details of all reported in previous press releases

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <li>&gt; 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.</li> <li>&gt; 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.</li> <li>&gt; The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<p>All drill hole intercepts reported are for down hole thickness not true thickness. Weighted averaging was used in preparing the intercepts reported.</p> <p>The drill intercepts were calculated by adding the weighted value (drill length x assay) for each sample across the entire pegmatite divided by the total drill thickness of the pegmatite. For each mineralized pegmatite, all assays were used in the composite calculations with no upper or lower cut-offs. Mineralized pegmatite is defined as spodumene bearing pegmatite.</p> <p>Intercepts were reported for entire pegmatites, taking into account lithological boundaries (i.e. sample to, and not across, major contacts), with additional high-grade sub intervals reported from the same pegmatite. In the case where thin wall rock intervals were included, a value of 0% Li<sub>2</sub>O was inserted for the assay value, thus giving that individual sample a weighted value of 0% Li<sub>2</sub>O.</p> <p>Cumulative thicknesses are reported for select drill holes. These cumulative thicknesses do not represent continuous mineralized intercepts. The cumulative thickness for a drill hole is calculated by adding the drill widths of two or more mineralized pegmatites encountered in the drill hole, all other intervals are omitted from the calculation.</p> <p>Li% was converted to Li<sub>2</sub>O% by multiplying Li% by 2.153.</p>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>&gt; These relationships are particularly important in the reporting of Exploration Results.</li> <li>&gt; If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>&gt; 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').</li> </ul>	<p>Drill intercepts are reported as Li<sub>2</sub>O% over the drill length, not true thickness. The pegmatites targeted strike northeast-southwest and dip moderately to the southeast or have a near vertical orientation. The holes were drilled to the northwest and southeast with inclinations ranging between -52.4 and -85.8.</p>
Diagrams	<ul style="list-style-type: none"> <li>&gt; 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.</li> </ul>	<p>Appropriate diagrams are in previous press releases.</p>
Balanced reporting	<ul style="list-style-type: none"> <li>&gt; 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.</li> </ul>	<p>All of the relevant exploration data for the Exploration Results available at this time has been provided in this report.</p>
Other substantive exploration data	<ul style="list-style-type: none"> <li>&gt; 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.</li> </ul>	<p>Soil sampling and walking magnetometer geophysical surveys have been completed on the Core and Central property as well as other regional properties</p>
Further work	<ul style="list-style-type: none"> <li>&gt; The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>&gt; Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<p>Piedmont may conduct additional drilling in 2021 at Central Property. Infill drilling is underway at the Core Property with results informing a DFS to be reported later in 2021.</p>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	> <i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i>	Geological and geotechnical observations are recorded digitally using the Geospark® Database System directly into a central relational database using standardized logging codes developed for the Project. To minimize risk of transcription errors sample data and analytical results are imported directly into the central database from the independent laboratory.
	> <i>Data validation procedures used.</i>	An extract of the Core database was validated by the Competent Person for internal integrity via Micromine® validation functions. This includes logical integrity checks of drill hole deviation rates, presence of data beyond the hole depth maximum, and overlapping from-to errors within interval data. Visual validation checks were also made for obviously spurious collar co-ordinates or downhole survey values.
<b>Site visits</b>	> <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i>	<p>The Competent Person; Leon McGarry P.Geo, has undertaken multiple personal inspections of the Piedmont Properties during 2017, 2018 and 2019 to review exploration sites, drill core and work practices. The site geology, sample collection, and logging data collection procedures were examined. A semi-random selection of drill collar locations at the Core, Central and Sunnyside properties was verified by the collection of independent check samples from drill core and outcrop from the Core Property. In addition to spodumene, the presence of by-product minerals: quartz, feldspar (albite and K-spar) and muscovite mineralization were verified by the inspection of drill core and outcrop.</p> <p>Travel to the site was curtailed during 2020 and 2021 due to the impact of the COVID-19 pandemic. The Competent Person monitored exploration at the property completed during this period through remote review of core photography and exploration activities by regular video conferencing with the exploration team.</p> <p>The outcome of site visits and subsequent remote review was the determination that data has been collected in a manner that supports reporting a Mineral Resource Estimate (MRE) for the Core, Central and Huffstetler properties in accordance with the JORC Code, and controls to the mineralization are well-understood.</p>
	> <i>If no site visits have been undertaken indicate why this is the case.</i>	Site visits have been conducted.
<b>Geological interpretation</b>	> <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i>	Geological models developed for the Core, Central and Huffstetler deposits are based on the lithological logging of visually distinct pegmatite spodumene-bearing pegmatites within amphibolite-biotite schist and metasedimentary host facies. Deposit geology is well understood based on surface pegmatite outcrops and extensive drilling at spacings sufficient to provide multiple points of observation for modeled geological features. Thicker units show good continuity between points of observation and allow a higher level of confidence for volume and mineralization interpretations. Whereas, the grade and thickness of thinner or weathered or altered units tend to be more discontinuous and interpretations have more uncertainty.
	> <i>Nature of the data used and of any assumptions made.</i>	Input data used for geological modeling are derived from qualitative interpretation of observed lithology and alteration features; semi-quantitative interpretation of mineral composition and the orientation of structural features; and quantitative determinations of the geochemical composition of samples returned from core drilling.
	> <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	Geological models developed for the Core, Central and Huffstetler deposits are underpinned by a good understanding of the deposit geology at the Piedmont properties. Based on input drillhole data, including orientated core measurements, and surface mapping, pegmatite dikes were modeled as variably orientated vertical to sub-horizontal sheets. Where drill data is sparse (i.e. at 80 m spacings) alternative interpretations, of the continuity of individual pegmatites between holes could be made. Alternate interpretations would adjust tonnage estimates locally but would not likely yield a more geologically reasonable result, or impact tonnage and grade estimates beyond an amount congruent with assigned confidence classifications.
	> <i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	The model developed for mineralization is guided by observed geological features and is principally controlled by the interpreted presence or absence of spodumene-bearing pegmatite. Estimated deposit densities are controlled by interpreted weathering surfaces. Above the saprolite surface, and in outcrop, spodumene-bearing pegmatites have variable Li <sub>2</sub> O and mineral composition grade populations,

Criteria	JORC Code explanation	Commentary
		sufficiently similar to fresh rock, allowing Li <sub>2</sub> O and mineral composition grade estimates not to be controlled by interpreted weathering surfaces.
	> <i>The factors affecting continuity both of grade and geology.</i>	Geological continuity is controlled by the preference for fractionated pegmatitic fluids to follow preferential structural pathways within the amphibolite and metasediment host rocks. Grade continuity within the pegmatite is controlled by pegmatite thickness, degree of fluid fractionation and the intensity of spodumene alteration to muscovite and amount of weathering. At the Core Property, modeled continuity is impacted by post-mineralization diabase intrusions and fault offsets in areas of limited extent. Modeled pegmatite extent is limited to within the Core, Central and Huffstetler property permit boundaries.
<b>Dimensions</b>	> <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i>	<p>Spodumene-bearing pegmatites on the Core Property are assigned to three major corridors. Corridors extend over a strike length of up to 1.7 km and commonly have a set of thicker dikes of 10–20 m true thickness at their core. These major dikes strike northeast and dip steep to moderately toward the southeast. Dikes are intersected by drilling to a depth of 300 m down dip. Dikes are curvi-planar in aspect. Flat to shallowly dipping sills and inclined sheets are encountered across the Core Property and are tested by drilling over 600 m along strike and 520 m down dip. The vertical thickness of individual sills and inclined sheets range from 1 m to 10 m. A close spaced series of sills and inclined sheets may have cumulative thicknesses greater than 10 m. Spodumene-bearing pegmatites, or a close spaced series of pegmatites, can be traced between drillhole intercepts and surface outcrops for over 1,400 m. Although individual units may pinch out, the deposit is open at depth. The Mineral Resource has a maximum vertical depth of 210 m, beginning at the topography surface. Ninety-five percent of the Mineral Resource is within 150 m of the topography surface.</p> <p>Spodumene-bearing pegmatites on the Central Property fall within a corridor that extends over a strike length of up to 0.6 km and contains a pair of thicker dikes of 10 m to 20 m true thickness at their core. These major dikes strike northeast and dip steeply to the southeast. Dikes are intersected by drilling to a depth of 225 m down dip. Although individual units may pinch out, the deposit is open at depth. The Central Mineral Resource has a maximum vertical depth of 275 m, beginning at the topography surface. On average, the model extends to 200 m below surface.</p> <p>Spodumene bearing pegmatites on the Huffstetler Property fall within a corridor that extends over a strike length of up to 0.4 km and form a stacked series of inclined sheets each 2 m to 18 m true thickness. Inclined sheets strike northeast and dip moderately to the northwest. Spodumene bearing pegmatites are intersected by drilling to a depth of 200 m down dip from surface however up-dip extents are limited by the south eastern edge of the permit boundary. Although individual units may pinch out, the deposit is open at depth. The Huffstetler Mineral Resource has a maximum vertical depth of 150 m, beginning at the topography surface.</p> <p>Predominantly, entire intervals of spodumene-bearing pegmatite are selected for modeling. Occasionally interstitial waste material 1 m to 2 m in thickness may be included to facilitate modeling at a resolution appropriate for available data spacings. No minimum thickness criteria are used for modeling; however, a pegmatite must be present in at least two drillholes to ensure adequate control on model geometry. Generally, spodumene-bearing pegmatite models are sufficient for use as MRE domains.</p>
<b>Estimation and modelling techniques</b>	> <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i>	<p>Samples coded by the modeled pegmatite domain they exploit were composited to 1 m intervals, a length equal to the dominant drill sample interval, and were then evaluated for the presence of extreme grades. Domained samples underwent spatial analysis within the Supervisor™ software which was used to define semi-variogram models for the Li<sub>2</sub>O grades and develop search ellipsoids and parameters. A four-pass search strategy was employed, with successive searches using more relaxed parameters for selection of input composite data and/or a larger search radius. Core, Central and Huffstetler Mineral Resources were estimated using Ordinary Kriging (OK) into block models created in Micromine®. The Li<sub>2</sub>O variable was estimated independently in a univariate sense.</p> <p>In addition to Li<sub>2</sub>O, regularized weight percent grades are modeled for nine minerals: spodumene, quartz, albite, K-spar, muscovite, anorthite, apatite, biotite and diopside, which were estimated independently in a univariate sense. The spatial</p>



Criteria	JORC Code explanation	Commentary
		variability of mineral grades is sufficiently similar to Li <sub>2</sub> O grades to allow the use of the same search parameters utilized for the previously released Mineral Resource study announced on April 8, 2021. The consistent estimation approach was selected to ensure block compositional grade proportions honor those of input samples, and that block grade estimates for compositional minerals approximate 100%.
	> <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i>	<p>This Core Property by-product MRE is an update to the by-product MRE for the Core Property reported on August 1, 2019.</p> <p>Estimates of by-product grades and tonnages show good agreement with previous estimates. Tonnages show an incremental increase attributable to drilling completed since the previous estimates.</p> <p>This Central Property by-product MRE is a maiden resource. This Huffstetler Property by-product MRE is a maiden resource.</p> <p>For each property resource estimate interpolations were checked visually, statistically, and using an Inverse Distance Weighted estimate.</p>
	> <i>The assumptions made regarding recovery of by-products.</i>	<p>Bench-scale metallurgical test work undertaken on material from the Core Property at NCSU-MRL announced on September 4, 2018 and at SGS Lakefield announced on May 13, 2020, recovered quartz, feldspar and mica concentrates as by-products to spodumene. These products were recovered at sufficient amounts and qualities to support the estimation of by-product Mineral Resources for the Core Property in addition to spodumene-hosted Li<sub>2</sub>O.</p> <p>Pegmatites at the Central and Huffstetler properties have comparable physical properties to Core Property pegmatites and have similar mineralogical proportions. Central and Huffstetler pegmatites are therefore concluded to have comparable grades and by-product specifications.</p>
	> <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i>	<p>Within the resource model, deleterious elements, such as iron are reported to be at acceptably to low levels. Metallurgical test work demonstrates that deleterious elements will not impede the economic extraction of the modeled spodumene hosted lithium and by-product minerals. No estimates for other elements were generated.</p> <p>Core Property pegmatites have comparable mineralogical and physical properties to pegmatites at the Central and Huffstetler properties.</p>
	> <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>	<p>Rotated block models aligned to the dominant strike of pegmatites were orientated at 35° for the Core and Huffstetler deposits and at 40° for the Central deposit.</p> <p>Given the variable orientation and the thickness of the Core and Huffstetler MRE domains, a block size of 6 m(E) x 12 m(N) x 6 m(RL) was selected to honor moderately dipping pegmatites in the across strike dimension, and the shallow dipping pegmatites in the vertical dimension. For the Central Property, a block size of 6 m(E) x 18 m(N) x 18m(RL) was selected to honor steeply dipping pegmatites in the across strike dimension.</p> <p>Core, Central and Huffstetler parent block dimensions compare to an average drillhole spacing of 40 m within the more densely informed areas, that increases up to an 80 m spacing in less well-informed areas. Blocks were sub-celled to a minimum resolution of 2 m(E) x 4 m(N) x 1 m(RL).</p>
	> <i>Any assumptions behind modelling of selective mining units.</i>	Block dimensions are assumed to be appropriate for the mining selectivity achievable via open-pit mining method and likely bench heights. At the neighboring Hallman-Beam mine operating benches of 9 m were mined.
	> <i>Any assumptions about correlation between variables.</i>	For the Core, Central and Huffstetler properties modeled by-product mineral grades show both positive and negative correlations between modeled variables. Regularized weight percent grades are modeled independently in a univariate sense using search parameters that result in block model grade estimates that honor mineral proportions that result from normative calculations.
	> <i>Description of how the geological interpretation was used to control the resource estimates.</i>	Modeled pegmatite dikes host and constrain the mineralization model. Each pegmatite domain was estimated independently with hard boundaries assumed for each separate pegmatite body. The dominant modeled orientation of pegmatite units was used to inform search ellipse parameters, so that in-situ grade trends are reflected in the block model.

Criteria	JORC Code explanation	Commentary
	<p>&gt; Discussion of basis for using or not using grade cutting or capping.</p> <p>&gt; The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</p>	<p>Domained by-product mineral grade data show normal distributions that do not contain extreme values and have coefficients of variation less than 1. On this basis, it is not necessary to cap by-product mineral grades.</p> <p>Block model estimates were validated visually and statistically. Estimated block grades were compared visually in section against the corresponding input data values. Additionally, trend plots of input data and block estimates were compared for swaths generated in each of the three principal geometric orientations (northing, easting, and elevation). Statistical validation included a comparison of composite means, and average block model grades, and a validation by Global Change of Support analysis.</p>
Moisture	> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are reported on a dry basis.
Cut-off parameters	> The basis of the adopted cut-off grade(s) or quality parameters applied.	The economic extraction of by-product minerals at the is contingent on the economic extraction of lithium Mineral Resources at the Project. Accordingly, the by-product Mineral Resource is reported using a 0.4% $\text{Li}_2\text{O}$ cut-off which approximates cut-off grades used for comparable spodumene-bearing pegmatite deposits exploited by open pit mining.
Mining factors or assumptions	> Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	<p>The methods used to design and populate the Core and Central Mineral Resource block models were defined under the assumption that the deposit will be mined via open pit methods, since the depth, geometry and grade of pegmatites at the property make them amenable to exploitation by those methods. Inspection of drill cores and the proximity of open pit mines in similar rock formations indicate that ground conditions are likely suitable for such a mining method.</p> <p>The Core resource model is constrained by a conceptual pit shell derived from a Whittle optimization using estimated block value and mining parameters appropriate for determining reasonable prospects of economic extraction. These include a maximum pit slope of 50°, appropriate recovery and dilution factors, a mining cost of US\$2.25/t, a SC6 concentration cost of US\$25 /t, a processing cost of US\$2,616/t LiOH and a commodity price equivalent to US\$ 12,910 /t LiOH.</p> <p>Conceptual shells for Central and Huffstetler resource models, developed using the above parameters, extended to the base of the resource model where the deposit is open, and beyond the modeled strike extent of the resource model where the deposit is open. Accordingly, the entire Central and Huffstetler resource models are considered to have reasonable prospects of eventual economic extraction.</p>
Metallurgical factors or assumptions	> The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<p>The materials targeted for extraction comprise spodumene, quartz, feldspar and mica minerals for which metallurgical processing methods are well established. Based on metallurgical test work completed by SGS and reported by the company, which indicates:</p> <ul style="list-style-type: none"> <li>Spodumene concentrate grades exceeding 6.0% <math>\text{Li}_2\text{O}</math> and less than 1.0% <math>\text{Fe}_2\text{O}_3</math>.</li> <li>Quartz samples delivered to potential solar glass customers and met customer quality expectations and has characteristics comparable to marketable quartz products.</li> <li>Feldspar concentrate, comprised of albite and K-spar minerals, has characteristics comparable to marketable feldspar products.</li> <li>Muscovite mica concentrate has physical properties comparable to marketable muscovite products.</li> </ul> <p>The Competent Person has assumed that metallurgical concerns will not pose any significant impediment to the economic processing and extraction of spodumene from mined pegmatite.</p>
Environmental factors or assumptions	> Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a	No assumptions have been made regarding waste streams and disposal options; however, the development of local pegmatite deposits within similar rock formations was not impeded by negative environmental impacts associated with their exploitation by open cut mining methods. It is reasonable to assume that in the vicinity of the Project area, there is sufficient space available for the storage of waste products arising from mining.

Criteria	JORC Code explanation	Commentary
	<i>greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i>	
<b>Bulk density</b>	<p>&gt; <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></p>	<p>In situ dry bulk densities for the Core, Central and Huffstetler Mineral Resource were assigned on a lithological basis using representative averages.</p> <p>At Core average bulk densities for spodumene bearing pegmatite and waste rock were derived from 1,568 determinations on selected drill core from the Property made by Piedmont geologists in the field and 139 by SGS Labs, Lakefield, Ontario.</p> <p>At Central average bulk densities for spodumene bearing pegmatite and waste rock were derived from 197 determinations made by Piedmont geologists in the field on selected drill core from the Property. Density of weathered spodumene bearing pegmatite is taken from available data at Core property as of January 8, 2021.</p> <p>At Huffstetler average bulk densities for fresh spodumene bearing pegmatite and waste rock were derived from 55 determinations made by Piedmont geologists in the field on selected drill core from the Property. Density of weathered spodumene bearing pegmatite and waste rock is taken from available data at Core property as of February 15, 2021.</p> <p>Both Piedmont and SGS used the displacement method. Core fragments are typically 6 to 10 cm in length and 90 to 120 cm<sup>3</sup> in volume. The Competent Person considers the values chosen to be suitably representative.</p>
	<p>&gt; <i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</i></p>	<p>Bulk density determinations are made on waste rock, saprolite and overburden. Moisture content of porous rock is determined from the change in mass after samples are dried. Void spaces were adequately accounted for by coating samples in cling film.</p>
	<p>&gt; <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<p>For the Core Property, simple averages were generated for fresh pegmatite (2.71 t/m<sup>3</sup>), pegmatite saprolite (1.83 t/m<sup>3</sup>), overburden waste (1.31 t/m<sup>3</sup>), saprolite waste rock (1.32 t/m<sup>3</sup>) and amphibolite/metasedimentary country rock (2.88 t/m<sup>3</sup>).</p> <p>For the Central Property, simple averages were generated for fresh pegmatite (2.84 t/m<sup>3</sup>), pegmatite saprolite (1.86 t/m<sup>3</sup>), overburden waste rock (1.23 t/m<sup>3</sup>), saprolite waste rock (1.36 t/m<sup>3</sup>) and country rock (2.95 t/m<sup>3</sup>).</p> <p>For the Huffstetler Property, simple averages were generated for fresh pegmatite (2.70 t/m<sup>3</sup>), pegmatite saprolite (1.86 t/m<sup>3</sup>), overburden waste rock (1.30 t/m<sup>3</sup>), saprolite waste rock (1.36 t/m<sup>3</sup>) and country rock (2.84 t/m<sup>3</sup>).</p>
<b>Classification</b>	<p>&gt; <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p>	<p>Mineral Resources at the Core and Central and properties have been classified as Indicated and Inferred on a qualitative basis; taking into consideration numerous factors such as: the validity and robustness of input data and the estimator's judgment with respect to the proximity of resource blocks to sample locations and confidence with respect to the geological continuity of the pegmatite interpretations and grade estimates. All blocks captured in pegmatite dike interpretation wireframes below the topography surface are classified as Inferred. Indicated classification boundaries were generated that define a region of blocks that are informed by at least two drillholes and eight samples within a range of approximately 25 m to the nearest drillhole in the along strike or strike and downdip directions. No Measured category resources are estimated.</p>
	<p>&gt; <i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></p>	<p>The classification reflects areas of lower and higher geological confidence in mineralized lithological domain continuity based on the intersecting drill sample data numbers, spacing and orientation. Overall mineralization trends are reasonably consistent within the various lithology types over numerous drill sections.</p>
	<p>&gt; <i>Whether the result appropriately reflects the Competent Person's view of the deposit</i></p>	<p>The Core, Huffstetler and Central Property MREs appropriately reflect the Competent Person's views of the deposit.</p>

Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	> <i>The results of any audits or reviews of Mineral Resource estimates.</i>	The current model has not been audited by an independent third party.
<b>Discussion of relative accuracy/ confidence</b>	> <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i>	The accuracy of Mineral Resources for the Core, Central Huffstetler properties is communicated through the classification assigned to the deposit. The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 2 of this Table.
	> <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i>	By-product Mineral Resource statements for the Core, Central and Huffstetler relate to a global estimate of in-situ mineralized rock tonnes and estimated quartz by-product tonnage, estimated feldspar by-product tonnage comprising albite and K-spar minerals, and estimated muscovite mica by-product tonnage.
	> <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	There is no recorded production data for the Piedmont properties.