

## **UPDATED SCOPING STUDY EXTENDS PROJECT LIFE AND ENHANCES EXCEPTIONAL ECONOMICS**

**Piedmont Lithium Limited** (“**Piedmont**” or “**Company**”) is pleased to report the results of the Company’s updated Scoping Study (“**Scoping Study**”) for its vertically integrated Piedmont Lithium Project (“**Project**”) located within the Carolina Tin-Spodumene Belt (“**TSB**”) in North Carolina, USA.

The Project includes a lithium hydroxide chemical plant (“**Chemical Plant**”) supplied with spodumene concentrate from an open pit mine and concentrator (“**Mine**” or “**Mine/Concentrator**”).

The Project has compelling projected economics due to attractive capital and operating costs, long mine life, significant by-product credits, short transportation distances, minimal royalties and low corporate income taxes.

This updated Scoping Study incorporates the expanded Mineral Resource update published in June 2019 which has extended the overall project life to 25 years.

### Updated Scoping Study Parameters – Cautionary Statements

The updated Scoping Study referred to in this announcement has been undertaken to determine the potential viability of an open pit mine, spodumene concentrator and lithium hydroxide plant constructed in North Carolina, USA and to reach a decision to proceed with more definitive studies. The Mine/Concentrator portion of the Scoping Study has been prepared to an accuracy level of  $\pm 25\%$  and the Lithium Chemical Plant to an accuracy of  $\pm 35\%$ . The results should not be considered a profit forecast or production forecast.

The updated Scoping Study is a preliminary technical and economic study of the potential viability of the vertically-integrated Piedmont Lithium Project. In accordance with the ASX Listing Rules, the Company advises it is based on low-level technical and economic assessments that are not sufficient to support the estimation of Ore Reserves. Further evaluation work including infill drilling and appropriate studies are required before Piedmont will be able to estimate any Ore Reserves or to provide any assurance of an economic development case.

Approximately 53% of the total production targets are in the Indicated Mineral Resource category with 47% in the Inferred Mineral Resource category. 100% of the production target in years 1-3 is in the Indicated Mineral Resource category. The Company has concluded that it has reasonable grounds for disclosing a production target which includes an amount of Inferred material. However, there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work (including infill drilling) on the Piedmont deposit will result in the determination of additional Indicated Mineral Resources or that the production target itself will be realized.

The updated Scoping Study is based on the material assumptions outlined elsewhere in this announcement. These include assumptions about the availability of funding. While Piedmont considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range outcomes indicated in the updated Scoping Study, additional funding will likely be required. Investors should note that there is no certainty that Piedmont will be able to raise funding when needed. It is also possible that such funding may only be available on terms that dilute or otherwise affect the value of the Piedmont’s existing shares. It is also possible that Piedmont could pursue other ‘value realization’ strategies such as sale, partial sale, or joint venture of the Project. If it does, this could materially reduce Piedmont’s proportionate ownership of the Project.

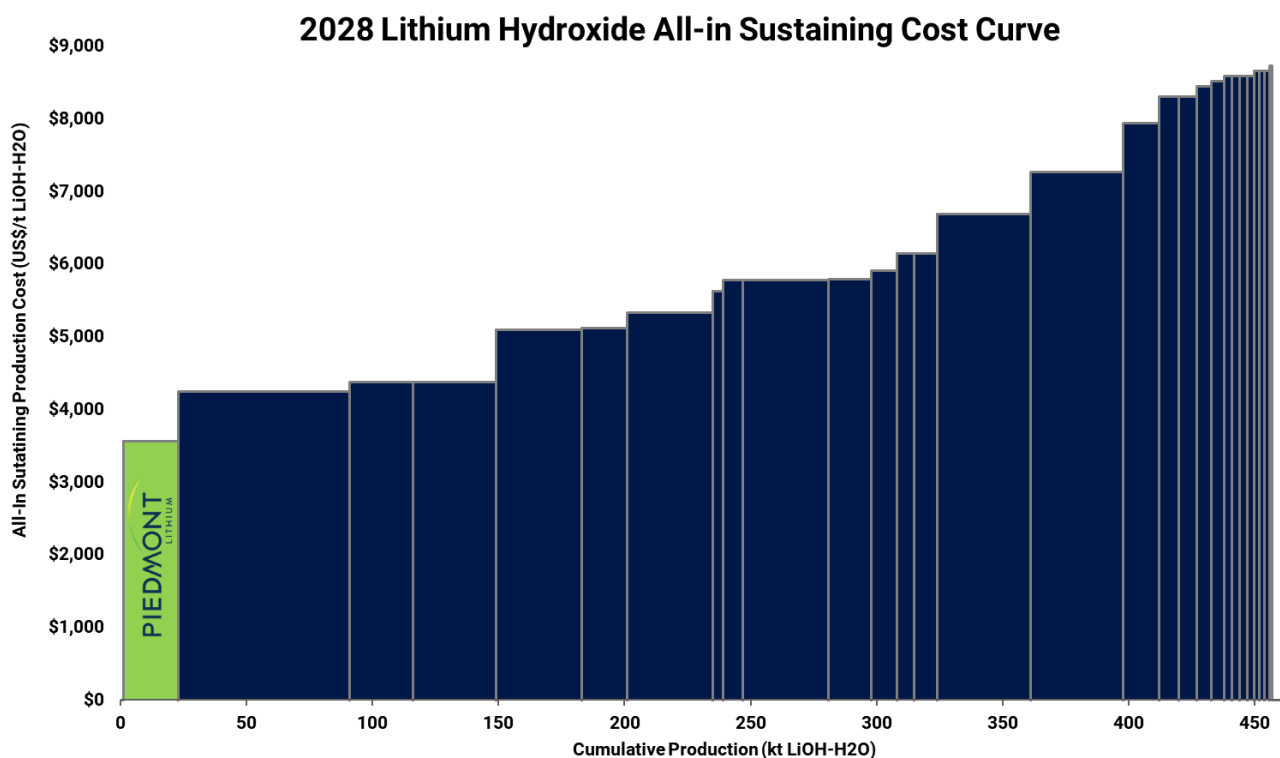
The Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes that it has a reasonable basis to expect it will be able to fund the development of the Project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

## EXECUTIVE SUMMARY

Piedmont is pleased to report the results of the updated Scoping Study for its vertically integrated lithium hydroxide chemical project located in North Carolina, USA. The Scoping Study includes a steady-state 22,700 tonnes per year (“t/y”) lithium hydroxide (“LiOH”) Chemical Plant supported by a Mine/Concentrator producing 160,000t/y of 6% Li<sub>2</sub>O spodumene concentrate (“Concentrate” or “SC6.0”). By-products quartz, feldspar, and mica will provide credits to the cost of lithium production. The Scoping Study features:

- **Integrated project to produce 22,700t/y of LiOH**
- **25-year project life with 2 years of concentrate-only sales and 23 years of integrated operations**
  - **More than 100% increase in life-of-project LiOH production compared with prior studies**
- **1<sup>st</sup> quartile operating costs**
  - **Lithium hydroxide cash costs of US\$3,105/t (AISC of US\$3,565/t)**
  - **Spodumene concentrate cash costs of US\$199/t (AISC of US\$238/t)**
- **Exceptional project economics**
  - **NPV<sub>8%</sub> of US\$1.45B**
  - **After-tax IRR of 34%**
  - **Steady-state annual average EBITDA of US\$298M**
- **Mine/Concentrator engineering and metallurgical testwork completed to PFS-level**
- **Conventional technology selection in all project aspects**

The integrated Piedmont project is projected to have an average life of project all-in sustaining cost (“AISC”) of approximately \$3,565/t, including royalties and net of by-product credits, positioning Piedmont as the industry’s lowest-cost producer as reflected in the 2028 lithium hydroxide cost curve<sup>1</sup> (see Figure 1).



**Figure 1 – Lithium Hydroxide 2023 Cost Curve (Source – Roskill Lithium Cost Service)**

1 - AISC includes all direct and indirect operating costs including feedstock costs (internal AISC or external supply), refining, on-site G&A costs and selling expenses. It does not include costs associated with corporate-level G&A.

In comparison to the prior Scoping Study published September 12, 2018, every year of additional project life is a year of 'integrated operation', resulting in higher levels of cash flow than in the early 'concentrate only' years. Life-of-project LiOH production has thus more than doubled vs. the prior study, and EBITDA and NPV have correspondingly increased significantly. The project IRR has declined largely due to a more conservative assumption about the timing of initial capital spending and production ramp-up at the Mine/Concentrator. Operating costs have remained in the first quartile after detailed scrutiny at a PFS-level, while capital expenditures at the Mine/Concentrator have increased by ~\$38M to reflect the increased scale of the Company's land position and more rigorous assessment of the Project's infrastructure requirements.

<b>Table 1: Updated Scoping Study Comparative Results</b>	<b>Unit</b>	<b>2019 Study</b>	<b>2018 Study</b>
Mineral Resource Estimate		27.9Mt @ 1.11% Li <sub>2</sub> O	16.2Mt @ 1.12% Li <sub>2</sub> O
Project Life	years	25	13
After-Tax Net Present Value (NPV <sub>8</sub> )	US\$M	\$1,447	\$888
Average Steady State EBITDA	US\$M/y	\$298	\$235
Internal Rate of Return (IRR)	%	34	46
Initial Capex – Mine/Concentrator	US\$M	168	130
Lithium Hydroxide Cash Costs	US\$/t	3,105	3,112
Life-of-Project Lithium Hydroxide Produced	kt	489	216
Life-of-Project Spodumene Concentrate Produced	kt	3,810	1,960

## Conclusions and Next Steps

The Scoping Study demonstrates the integrated Project's strong commercial potential, and now puts Piedmont in a strong position to engage in discussions around future financing of the Project, including with prospective strategic and off-take partners. The Company will now concentrate on the following initiatives to create additional value in the Project:

- Continue Phase 4 drilling and expansion of the Company's land position in the TSB;
- Secure the necessary permits and approvals for the Mine/Concentrator;
- Commence metallurgical testwork for the production of LiOH from Piedmont spodumene concentrate;
- Accelerate the development of the Company's proposed lithium hydroxide chemical plant;
- Commence a detailed market study of the important US quartz, feldspar and mica markets; and
- Formalize our dialogue with a number of prospective strategic, technical and offtake partners.

Keith D. Phillips, President and Chief Executive Officer, said:

*"We are very pleased with the results of the updated Scoping Study, which reflect the benefits of a 25-year mine life, a refined concentrator flow sheet and PFS-level engineering and metallurgy. The economic benefit of developing an integrated lithium chemical business in North Carolina, USA is clear, driven by the exceptional infrastructure and human resource advantages of our location, as well as the competitive royalty and tax regime offered in the United States.*

*"Recent corporate transactions (i.e. Wesfarmers/Kidman and Albemarle/Wodgina) have reinforced the wisdom of the Company's integrated business strategy. We will continue to progress our Mine/Concentrator through the permitting and feasibility processes, but we will now redouble our efforts on the strategic front by accelerating our lithium hydroxide testwork and intensifying the initial strategic discussions we have had with a broad array of potential strategic, offtake and financial partners".*

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## Scoping Study Results

The Scoping Study is based on the updated Mineral Resource Estimate for the Piedmont Lithium Project reported in June 2019, of 27.9Mt at a grade of 1.11% Li<sub>2</sub>O and the By-Product Mineral Resource Estimates comprising 7.4Mt of quartz, 11.1Mt of feldspar and 1.1Mt of mica reported in July 2019.

The Scoping Study contemplates a 25-year project life, with the downstream lithium hydroxide chemical plant commencing in year 3 of mining operations. The ramp up period for Chemical Plant operations is estimated to achieve nameplate capacity after a 3 year ramp up period. The mining production target is approximately 25.6M at an average run of mine grade of 1.11% Li<sub>2</sub>O (undiluted) over the 25-year project life. Table 2 provides a summary of production and cost figures for the integrated project.

<b>Table 2: Piedmont Lithium Project – Life of Mine (“LOM”) Integrated Project</b>	<b>Unit</b>	<b>Estimated Value</b>
<b>PHYSICAL – MINE/CONCENTRATOR</b>		
Mine life	years	25
Steady-state annual spodumene concentrate production	t/y	160,000
LOM spodumene concentrate production	t	3,805,000
LOM quartz by-product production	t	1,920,000
LOM feldspar by-product production	t	2,795,000
LOM mica by-product production	t	275,000
LOM feed grade (excluding dilution)	%	1.11
LOM average concentrate grade	%	6.0
LOM average process recovery	%	85
LOM average strip ratio	waste:ore	10.4:1
<b>PHYSICAL – LITHIUM CHEMICAL PLANT</b>		
Steady-state annual lithium hydroxide production	t/y	22,700
LOM lithium hydroxide production	t	489,000
LOM concentrate supplied from Piedmont mining operations	t	3,100,000
Chemical Plant life	years	23
Commencement of lithium hydroxide chemical production	year	3
<b>OPERATING AND CAPITAL COSTS – INTEGRATED PROJECT</b>		
Average LiOH production cash costs using self-supplied concentrate	US\$/t	\$3,105
Mine/Concentrator – Direct development capital	US\$M	\$106.2
Mine/Concentrator – Owner’s costs	US\$M	\$11.3
Mine/Concentrator – Land acquisition costs	US\$M	\$28.3
Mine/Concentrator – Contingency	US\$M	\$22.1
Mine/Concentrator – Sustaining and deferred capital	US\$M	\$147.9
Mine/Concentrator – Working Capital	US\$M	\$20.0
Chemical Plant - Direct development capital	US\$M	\$252.6
Chemical Plant – Owner’s costs	US\$M	\$12.1
Chemical Plant – Contingency	US\$M	\$79.4
Chemical Plant – Sustaining and deferred capital	US\$M	\$86.5
<b>FINANCIAL PERFORMANCE – INTEGRATED PROJECT – LIFE OF PROJECT</b>		
<b>Annual steady state EBITDA</b>	<b>US\$M/y</b>	<b>\$240-\$340</b>
<b>Annual steady state after-tax cash flow</b>	<b>US\$M/y</b>	<b>\$195-\$260</b>
<b>Net operating cash flow after tax</b>	<b>US\$M</b>	<b>\$5,370</b>
<b>Free cash flow after capital costs</b>	<b>US\$M</b>	<b>\$4,630</b>
<b>After tax Net Present Value (NPV) @ 8% discount rate</b>	<b>US\$M</b>	<b>\$1,447</b>
<b>After tax Internal Rate of Return (IRR)</b>	<b>%</b>	<b>34</b>

## Project Overview

Piedmont Lithium Limited (ASX: PLL; Nasdaq: PLL) holds a 100% interest in the Piedmont Lithium Project located within the TSB and along trend to the Hallman Beam and Kings Mountain mines, which historically provided most of the western world's lithium between the 1950s and the 1980s. The TSB has been described as one of the largest lithium regions in the world and is located approximately 25 miles west of Charlotte, North Carolina.

Portions of the Project were originally explored by Lithium Corporation of America which was eventually acquired by FMC Corporation (now Livent Corporation). A Canadian exploration company, North Arrow Minerals, completed a 19-drill hole, 2,544 meter exploration drill program on the property in 2009-2010.

The Company has undertaken four drill campaigns on the project totaling 333 drill holes and 52,441 meters of drilling.

Piedmont, through its 100% owned U.S. subsidiary, Piedmont Lithium Inc., has entered into exclusive option and land acquisition agreements with local landowners which, upon exercise, allow the Company to purchase (or in some cases long-term lease) approximately 2,206 acres of surface property and the associated mineral rights. The Company also controls a 60-acre parcel in Kings Mountain, North Carolina for the site of the Company's planned Chemical Plant.

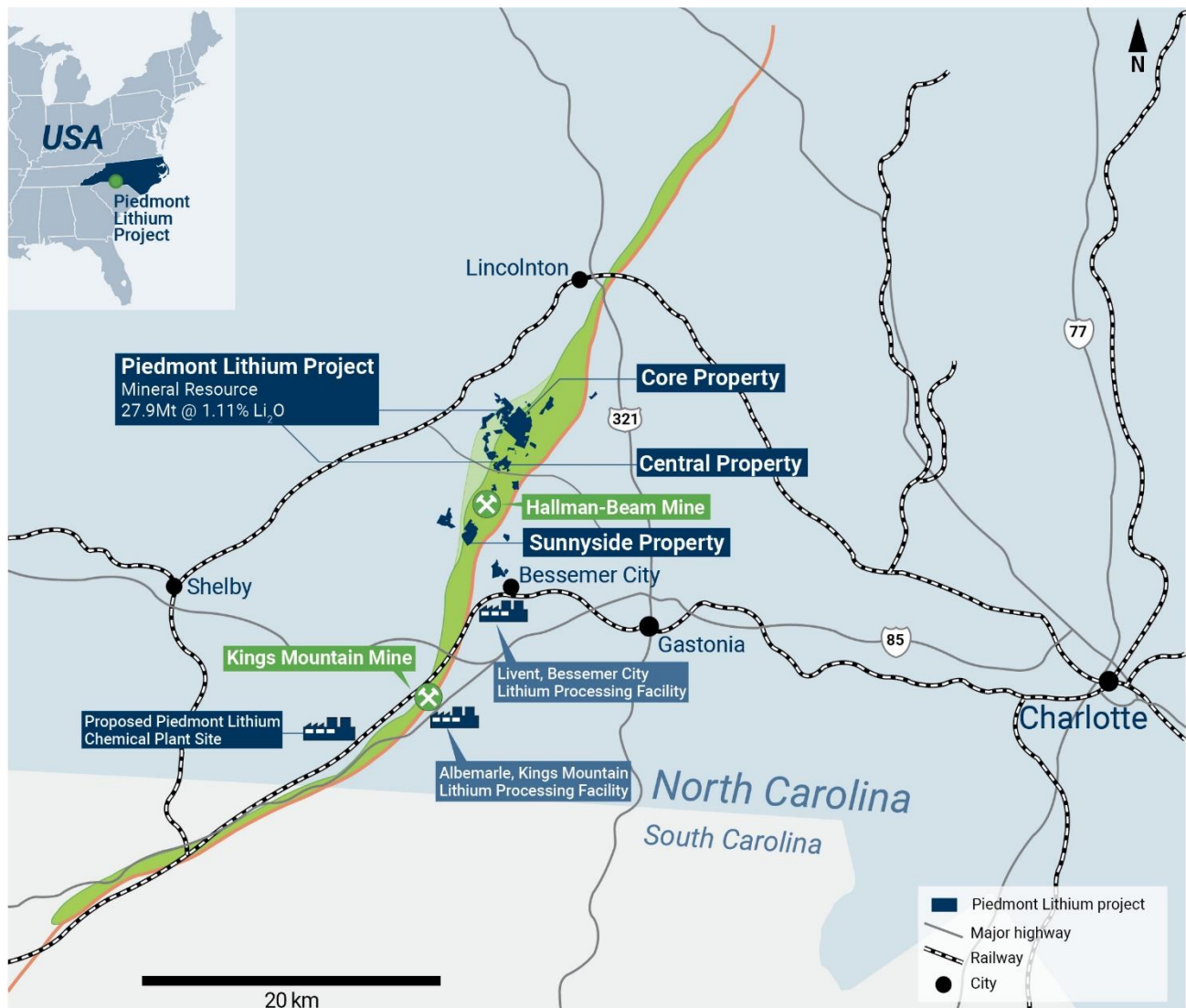


Figure 2 - Piedmont Lithium Project located within the TSB

## Scoping Study Consultants

The Scoping Study uses information and assumptions provided by a range of independent consultants, including the following consultants who have contributed to key components of the Scoping Study.

Consultant	Scope of Work
Primero Group Limited	Process engineering and infrastructure
SGS Lakefield	Metallurgical testwork
Marshall Miller and Associates	Mine design and scheduling
CSA Global Pty Ltd	Resource estimation
HDR Engineering, Inc. of the Carolinas	Permitting, environment, and social studies
Johnston, Allison, and Hord	Land title and legal
Roskill	Lithium Products Marketability
CSA Global Pty Ltd	By-Products Marketability

## Mineral Resource Estimates

On June 25, 2019 the Company announced an updated Mineral Resource Estimate prepared by independent consultants CSA Global Pty Ltd (“**CSA Global**”) in accordance with JORC Code (2012 Edition). The total Mineral Resources for the Project are 27.9Mt grading at 1.11% Li<sub>2</sub>O.

Resource Category	Core property		Central property		Total			
	Tonnes (Mt)	Grade (Li <sub>2</sub> O%)	Tonnes (Mt)	Grade (Li <sub>2</sub> O%)	Tonnes (Mt)	Grade (Li <sub>2</sub> O%)	Li <sub>2</sub> O (t)	LCE (t)
Indicated	12.5	1.13	1.41	1.38	13.9	1.16	161,000	398,000
Inferred	12.6	1.04	1.39	1.29	14.0	1.06	148,000	366,000
<b>Total</b>	<b>25.1</b>	<b>1.09</b>	<b>2.80</b>	<b>1.34</b>	<b>27.9</b>	<b>1.11</b>	<b>309,000</b>	<b>764,000</b>

An important feature of the Core MRE, is that 74% or 18.6 Mt is located within 100 meters of surface. Table 5 shows the details of the MRE with regards to depth from surface.

Depth (from surface) (m)	Tonnes (Mt)	Percentage of Resource (%)	Cumulative Tonnes (Mt)	Cumulative % of Resource
<b>0 - 50</b>	8.7	35	8.7	35
<b>50 - 100</b>	9.9	39	18.6	74
<b>100 - 150</b>	5.7	23	24.3	97
<b>150 +</b>	0.8	3	25.1	100

On July 31, 2019 the Company announced updated Mineral Resource Estimates for by-products quartz, feldspar and mica. The results are shown in Table 6. The by-product Mineral Resource estimates have been prepared by independent consultants, CSA Global and are reported in accordance with the JORC Code (2012 Edition). 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 Estimates are reported at a 0.4% Li<sub>2</sub>O cut-off grade, consistent with the lithium MRE for the Project.

Table 6: Mineral Resource Estimates – Piedmont Lithium Project Core Property									
Category	Tonnes (Mt)	Li <sub>2</sub> O		Quartz		Feldspar		Mica	
		Grade (%)	Tonnes (t)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)
Indicated	12.5	1.13	141,000	30.0	3.75	44.4	5.55	4.5	0.56
Inferred	12.6	1.04	131,000	28.7	3.61	44.4	5.58	4.4	0.56
<b>Total</b>	<b>25.1</b>	<b>1.09</b>	<b>272,000</b>	<b>29.3</b>	<b>7.36</b>	<b>44.4</b>	<b>11.13</b>	<b>4.5</b>	<b>1.12</b>

Figure 3 shows the relative position of the Core and Central resources, resource constraining shells, and exploration targets.

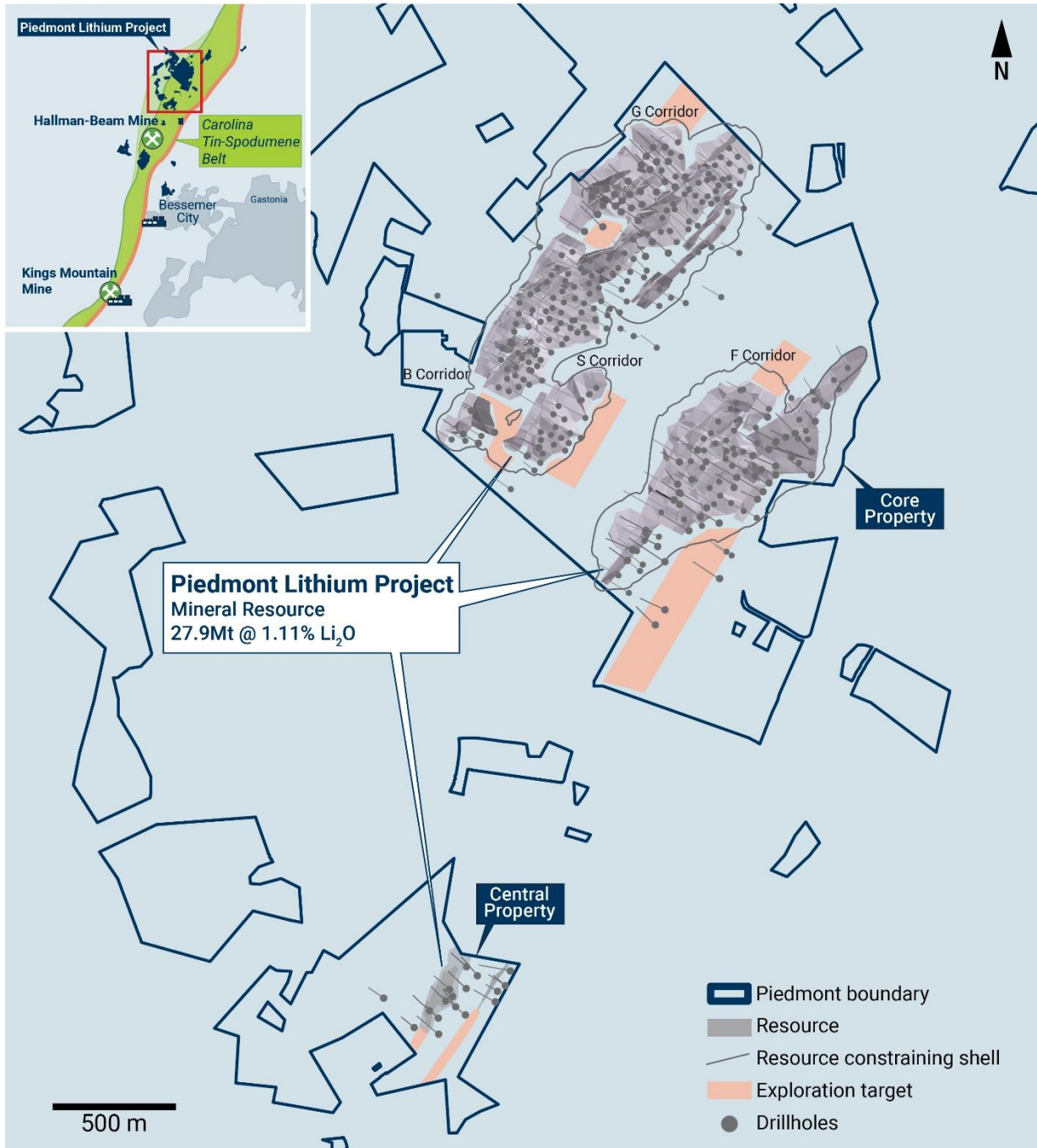


Figure 3 - Plan View of Core Property Showing Drill Hole Locations, Resource, and Resource Shell

## Mining and Production Target

Independent consultants Marshall Miller and Associates used SimSched™ software to generate a series of economic pit shells using the updated Mineral Resource block model and input parameters as agreed by Piedmont. Overall slope angles in rock were estimated following a preliminary geotechnical analysis that utilized fracture orientation data from oriented core and downhole geophysics (Acoustic Televiwer), as well as laboratory analysis of intact rock strength. The preliminary geotechnical assessment involved both kinematic and overall slope analyses utilizing Rocscience™ modeling software.

Overall slope angles of 45 degrees were assumed for overburden and oxide material. Overall slope angles of 53 degrees were estimated for fresh material which includes a ramp width of 30 meters. Production schedules were prepared for the Project based on the following parameters:

- A targeted run-of-mine production of 1.15Mt/y targeting a process plant output of about 160,000t/y of 6.0% Li<sub>2</sub>O spodumene concentrate from the Core property
- The Central property production target was based on a process plant throughput of about 900,000t/y to produce about 160,000t/y of 6.0% Li<sub>2</sub>O spodumene concentrate
- By-product output of 86kt of quartz, 125kt of feldspar, and 13kt of mica concentrate annually
- About 75% of average annual production realized in the first year of operations accounting for commissioning and ramp up
- Mining dilution of 5%
- Mine recovery of 95%
- Processing recovery of 85%
- A mining sequence targeting maximized utilization of Indicated Mineral Resources at the front end of the schedule

Pit optimizations were completed by Marshall Miller to produce a production schedule on an annual basis, resulting in a total production target of approximately 3.8Mt of spodumene concentrate, averaging approximately 160,000t/y of spodumene concentrate over the 25-year mine life. This equates to an average of 1.15Mt/y of ore processed, totaling approximately 25.6Mt of run-of-mine (“ROM”) ore at an average ROM grade of 1.11% Li<sub>2</sub>O (undiluted) over the 25-year mine life.

The results reported are based upon a scenario which maximizes extraction of Indicated Resources in the early years of production. Indicated resources represent 100% of the tonnes processed in years 1-3 of operations. The results shown assume that the Core property is mined from year 1-20 with Central property operations commencing in year 21. Table 7 shows the production target.

Property	ROM Tonnes Processed (kt)	Waste Tonnes Mined (kt)	Stripping Ratio (W:O t:t)	ROM Li <sub>2</sub> O Diluted Grade (%)	Production Years	Tonnes of Concentrate (kt)
Core	22,616	227,200	10.0	1.03	1-20	3,284
Central	2,951	38,790	13.1	1.25	21-25	521
<b>Total</b>	<b>25,567</b>	<b>265,990</b>	<b>10.40</b>	<b>1.05</b>	<b>1-25</b>	<b>3,805</b>

The Scoping Study assumes a lithium Chemical Plant production life of 23 years, commencing in year 3 of mining operations. Of the total production target of 3.8Mt of concentrate, approximately 0.7Mt will be sold to third parties during years 1 to 5 of mining operations and approximately 3.1Mt will be supplied to Piedmont’s Chemical Plant for conversion into lithium hydroxide during years 3 to 25 of operations, resulting in a total production target of approximately 489,000t of lithium hydroxide, averaging approximately 21,260t/y of lithium hydroxide over the 23-year production life.

The Scoping Study assumes that approximately one-third of the by-product potential will be converted to product based on processing spodumene flotation tailings with approximately two-thirds of potential by-products reporting to waste via dense medium separation tailings. This results in production targets of 1.9Mt of quartz concentrate, 2.7Mt of feldspar concentrate, and 0.3Mt of mica concentrate over the life of mine. If



market conditions support additional sales potential then Piedmont will evaluate reprocessing of dense medium separation tailings to produce additional byproduct concentrates.

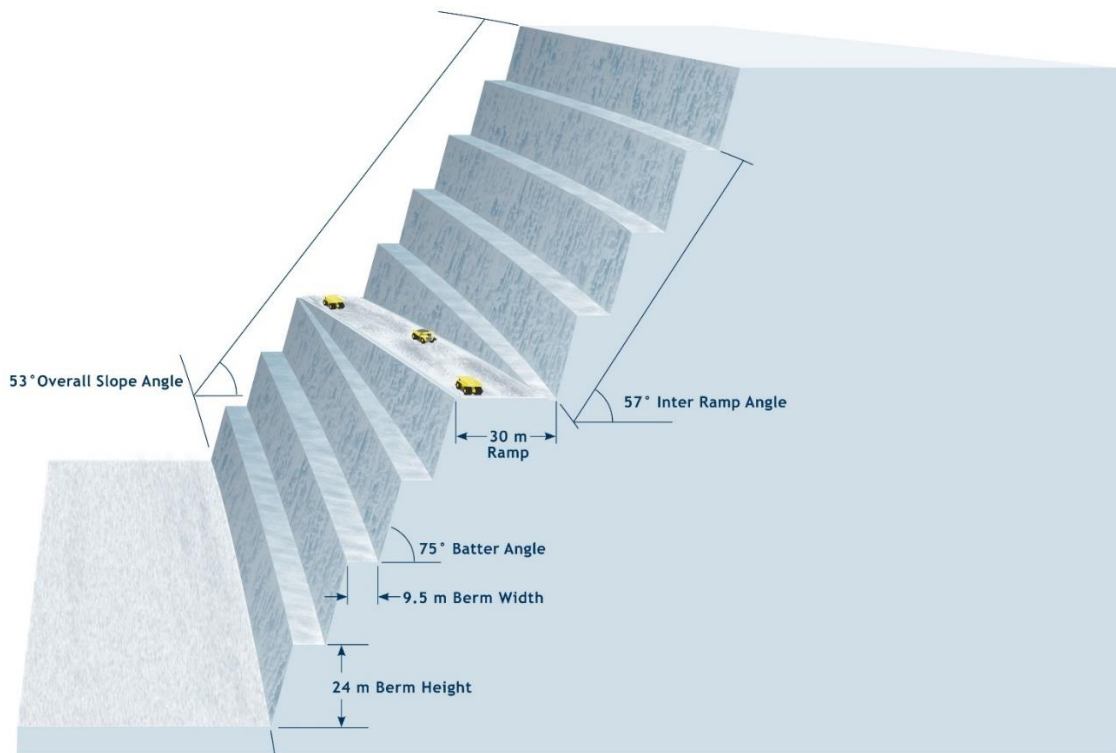
There remains significant opportunity to increase the mine life beyond 25 years or to increase annual capacity of the Project by discovery of additional resources within the TSB within a reasonable trucking or conveying distance to the proposed concentrator.

The mine design is based on an open pit concept assuming the following wall design configuration for oxide and overburden material in this Scoping Study:

- Batter face angle of 45 degrees
- Batter height of 10 vertical meters
- Berm width of 0 meters
- Overall slope angle of 45 degrees

The following wall design configuration was used for fresh material in this Scoping Study:

- Batter face angle of 75 degrees
- Batter height of 24 vertical meters (80 ft.) for final wall
- Berm width of 9.5 meters (30 ft.) for final wall
- Overall slope angle of 53 degrees for final wall, which includes a ramp width of 30 meters (98 ft.)



**Figure 4 – Representation of the Piedmont pit wall design based on wall design configuration estimates**

The pit wall design parameters indicated above are based on the results of a preliminary geotechnical assessment that utilized available fracture orientation measurements from exploration drilling and downhole geophysical logging, along with laboratory results for intact rock strength. The preliminary geotechnical analysis focused on assessment of fresh rock material. The pit wall dimensions indicated above are based on a final wall configuration. Working benches during mining are expected to be on the order of 12 meters high and 8 meters wide, with a batter angle of 75-degrees. The current mine plan takes into consideration the nature of the ore deposit and allows for smaller internal bench dimensions. The current pit wall dimensions are considered representative of average conditions. More detailed pit wall geotechnical assessment in specific areas is to be completed during a future definitive feasibility study (“DFS”).

## Waste Management

Mine operations will commence in the east pit with waste hauled to the central waste dump. East pit will be used as a future backfill pit for waste from the west and south pits. Generally waste disposal has been designed in 50 ft. (15.2m) lifts on 2:1 slopes with 20 ft. (6.1m) safety benches.

Waste disposal areas on the Project have been designed to a detail sufficient for permit approvals. Geochemical analysis results of the waste rock and tailings does not indicate the potential for acid drainage.

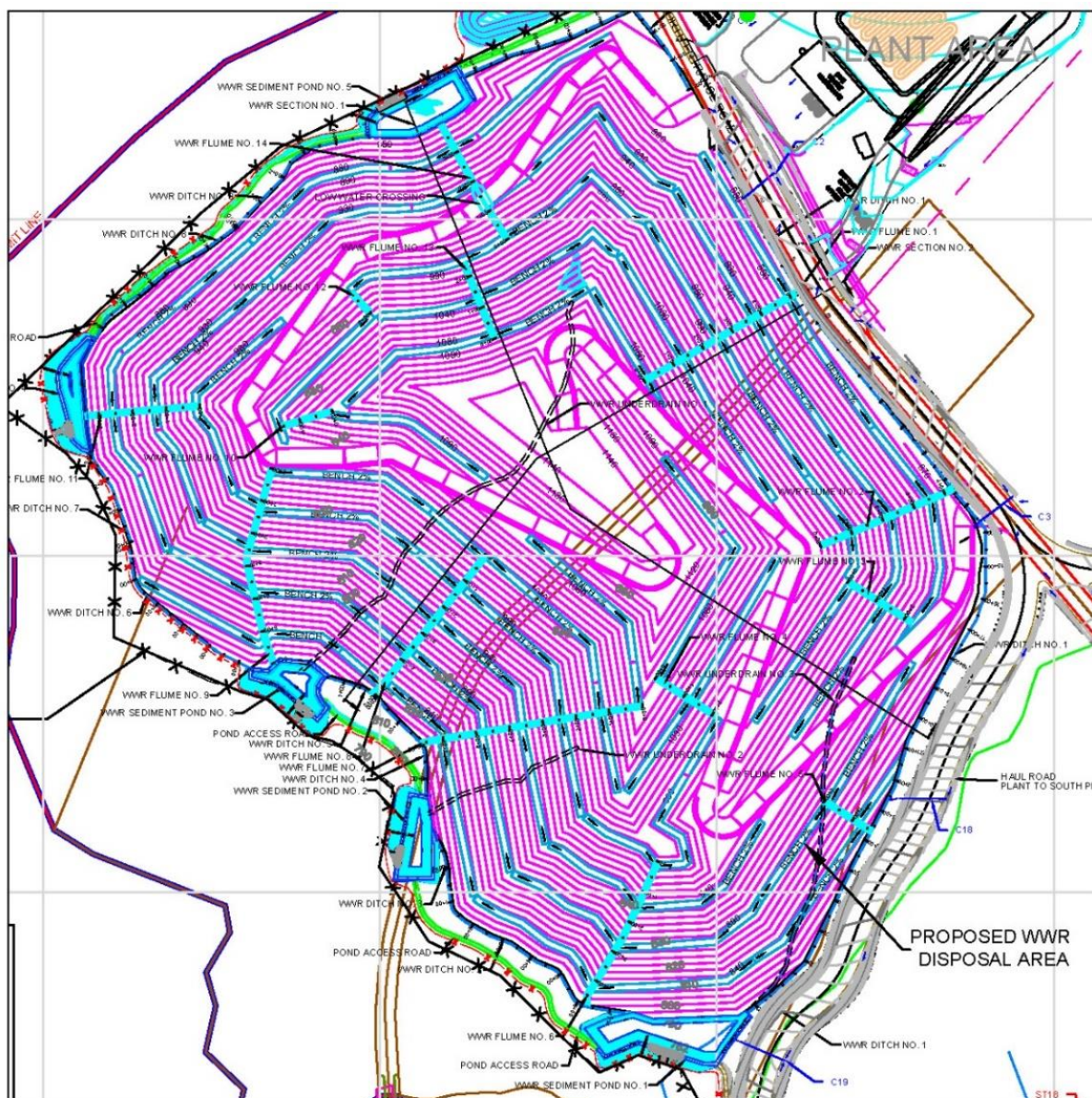


Figure 5 – Waste rock disposal areas have been designed to sufficient detail for permit applications and approvals

## Mineralogy

Piedmont has completed mineralogical testing, comprising semi-quantitative and quantitative x-ray diffraction ("XRD") analysis, on samples of mineralized pegmatites and composite samples from Piedmont's Core, Central, and Sunnyside Properties. All testwork to date effectively demonstrate that lithium occurs almost exclusively in spodumene in Piedmont's Mineral Resources. Mineralogy results were previously announced on June 18, 2019.

Certain hard rock lithium projects are understood to contain multiple lithium-bearing minerals (petalite, lepidolite, zinnwaldite, etc. as well as spodumene). Piedmont has been advised that the relatively pure spodumene character of its ore body is unusual and highly positive, allowing for a simplified flowsheet to produce strong lithium recoveries as achieved in the Company’s most recent metallurgical testwork program.

## Metallurgy

Piedmont engaged SGS laboratories in Lakefield, Ontario to undertake testwork on variability and composite samples.

Dense Medium Separation (“DMS”) and flotation Locked-Cycle Tests (“LCT”) test work results showed high quality spodumene concentrate product with a grade above 6.0% Li<sub>2</sub>O, iron oxide below 1.0%, and low impurities from composite samples. Table 8 shows the results of composite tests on the preferred flowsheet which were previously announced on July 17, 2019.

Sample	Feed Grade Li <sub>2</sub> O (%)	Concentrate Grade Li <sub>2</sub> O (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	Na <sub>2</sub> O (%)	K <sub>2</sub> O (%)	CaO+ MgO + MnO (%)	P <sub>2</sub> O <sub>5</sub> (%)
Dense Medium Separation		6.42	0.97	0.56	0.45	0.51	0.12
Locked Cycle Test		6.31	0.90	0.68	0.52	1.25	0.46
Piedmont Composite Sample 1	1.11	6.35	0.93	0.63	0.49	0.96	0.32

The composite samples were prepared to approximate the average grade of the Project’s ore body. Overall lithium recovery during testwork for the preferred flowsheet was 77% at a grade of 6.35% Li<sub>2</sub>O. Simulations based on the testwork results support an overall plant design recovery of 85% when targeting a 6.0% Li<sub>2</sub>O spodumene concentrate product. Further optimization will be undertaken in a future feasibility level pilot testwork program.

Figure 6 shows photographs of the coarse and fine DMS concentrates produced using the preferred process flow diagram. Piedmont spodumene concentrate is generally light green to white colored.



**Figure 6 - Coarse and fine final DMS concentrates produced from Piedmont composite samples**

## By-Product Metallurgy

Piedmont engaged North Carolina State University’s Minerals Research Laboratory (“MRL”) to conduct a comprehensive bench-scale testwork and optimization program on samples obtained from the Company’s Core land area for byproducts quartz, feldspar, and mica. The objective of the testwork program was to develop optimized conditions for spodumene flotation and magnetic separation for both grade and recovery which would then be applied to future testwork.

Likely product specifications for the Piedmont deposit are supported by the results of the bench-scale metallurgical test work program undertaken by Piedmont Lithium in 2018 at MRL.



Figure 7 - Examples of quartz, feldspar and mica concentrates from the Piedmont Project

## Quartz Results

Quartz data in three (3) samples showed results which may be favorable for the glass or optical glass markets (Table 9).

Parameter	Sample B	Sample F	Sample G
% SiO <sub>2</sub>	99.8	99.7	99.7
% Al <sub>2</sub> O <sub>3</sub>	0.10	0.10	0.14
% Other	0.14	0.015	0.14

Typical market specifications for quartz of various grades are shown in the table below for comparative purposes.

Specification	SiO <sub>2</sub> Min. %	Other Elements Max %	Other Elements Max ppm
Clear glass-grade sand	99.5	0.5	5,000
Semiconductor filler, LCD and optical glass	99.8	0.2	2,000
"Low Grade" HPQ	99.95	0.05	500

<sup>1</sup>Source – Modified from Richard Flook and the December 2013 Issue of Industrial Minerals Magazine (p25)

## Feldspar Results

Feldspar data in three (3) samples are reported in Table 11.

Parameter	Sample B	Sample F	Sample G
% SiO <sub>2</sub>	68.9	68.8	68.8
% Al <sub>2</sub> O <sub>3</sub>	18.5	18.6	18.6
% K <sub>2</sub> O	3.99	3.81	3.84
% Na <sub>2</sub> O	8.35	8.45	8.49
Total Na <sub>2</sub> O+K <sub>2</sub> O	12.34	12.26	12.33
% Fe <sub>2</sub> O <sub>3</sub>	0.02	0.01	0.02
% CaO	0.07	0.12	0.08

Table 12 shows representative feldspar market specifications for reference.

Product	Source	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	CaO	K <sub>2</sub> O	Na <sub>2</sub> O	K <sub>2</sub> O+Na <sub>2</sub> O
K-spar	North Carolina	18.0	0.07	0.14	10.1	3.6	13.7
Na-spar	North Carolina	19.0	0.07	1.6	4.0	7.0	11.0

<sup>3</sup> Source: Harben (2002) *Industrial Minerals Handbook*. ISBN 1 904333 04 4

## Mica Results

Mica quality is measured by its physical properties including bulk density, grit, color/brightness, and particle size. The bulk density of mica by-product generated from Piedmont composite samples was in the range of 0.680-0.682 g/cm<sup>3</sup>.

The National Gypsum Grit test is used mostly for minus 100-mesh mica which issued as joint cement compound and textured mica paint. The specification for total grit for mica is 1.0%. Piedmont sample grit results were in the range of 0.70-0.76.

Color/brightness is usually determined on minus 100-mesh material. Several instruments are used for this determination including the Hunter meter, Technedyne and the Photovoltmeter. The green reflectance is often reported for micas and talcs. Piedmont Green Reflectance results were in the range of 11.2-11.6.

## Process Design

The concentrator process design is based on SGS composite testwork. The flowsheet will be optimized during future DFS level pilot testwork. The basic process flow is shown schematically in Figure 8. Notably, DMS tailings and flotation tailings will be processed separately with the DMS and flotation process water circulated separately within the concentrator.

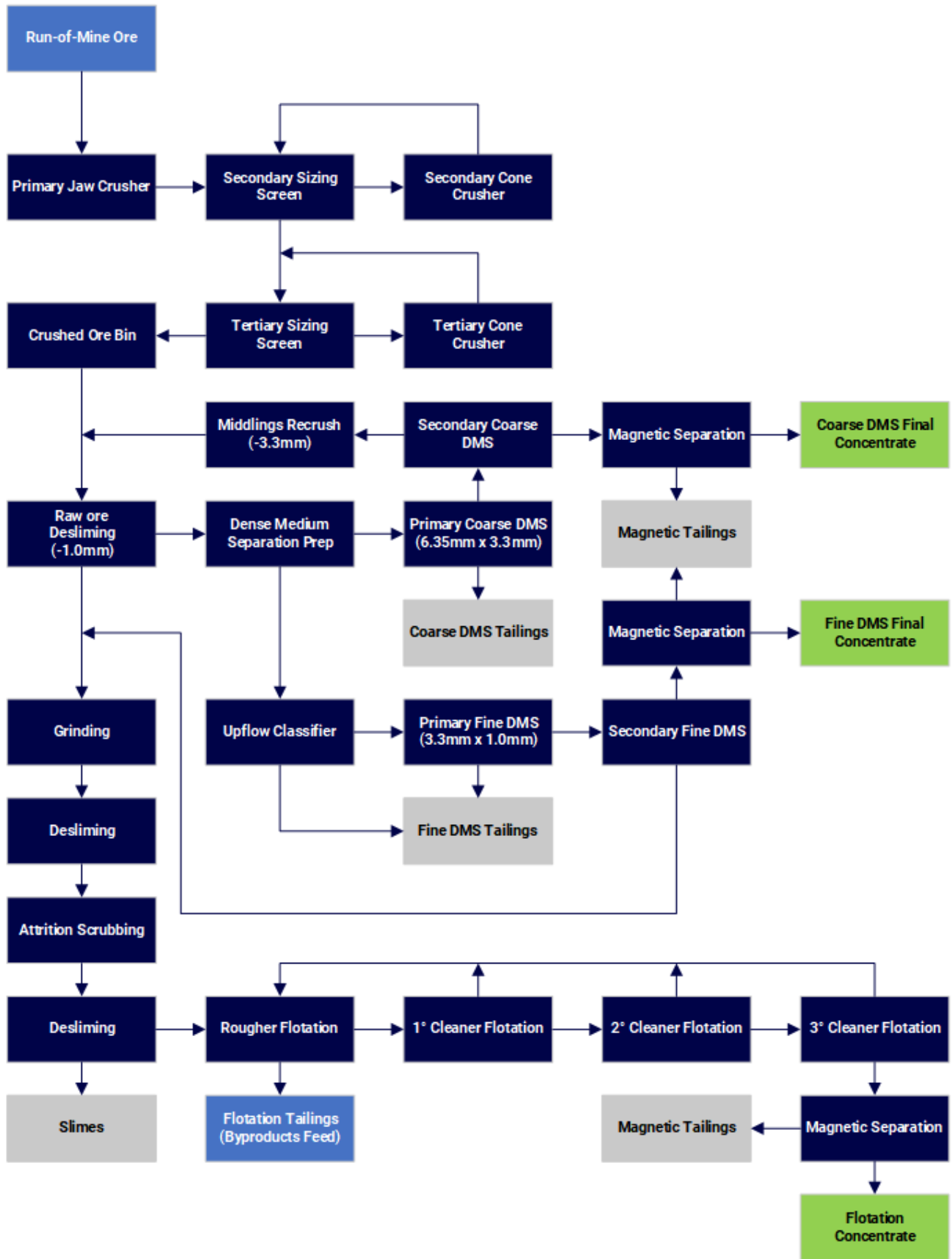


Figure 8 – Proposed Spodumene Concentrator Flowsheet

Quartz, feldspar and mica will be recovered via a series of flotation and magnetic separation circuits as shown in Figure 9.

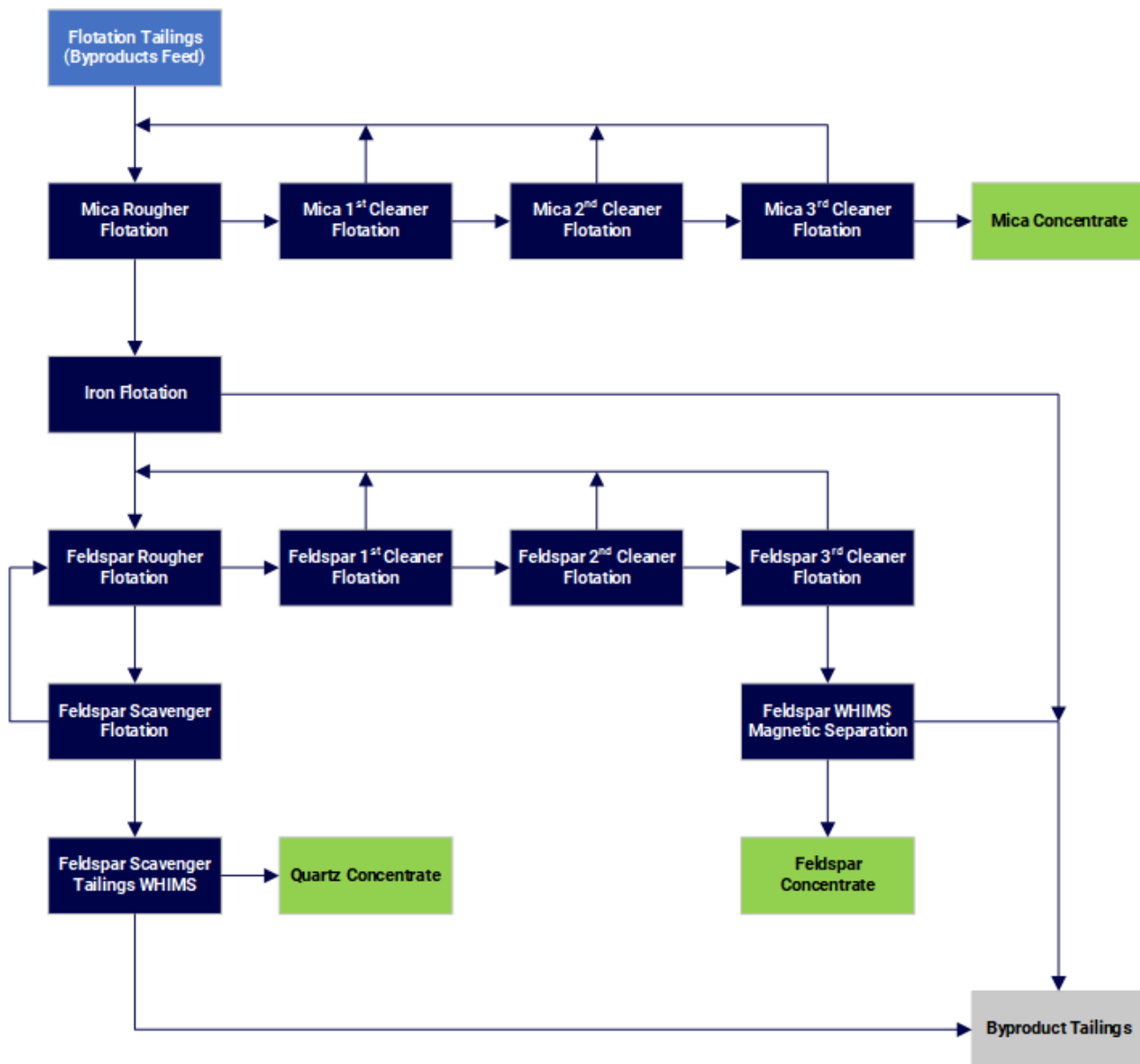


Figure 9 – By-Product Circuits

After review of multiple conventional and novel lithium conversion techniques, Piedmont proposes to use a direct-to-hydroxide conversion approach in its Chemical Plant. The process is commonplace among Chinese lithium chemical plants operated by producers including Albemarle, Ganfeng, Tianqi, General Lithium and Yahua.

Piedmont selected the direct-to-hydroxide process based on an analysis of various process alternatives taking into consideration capital and operating costs, total economic return, technology risk, and other factors.

The Chemical Plant will focus on the maximization of production of battery grade quality lithium hydroxide monohydrate but will maintain future optionality to produce lithium carbonate products.

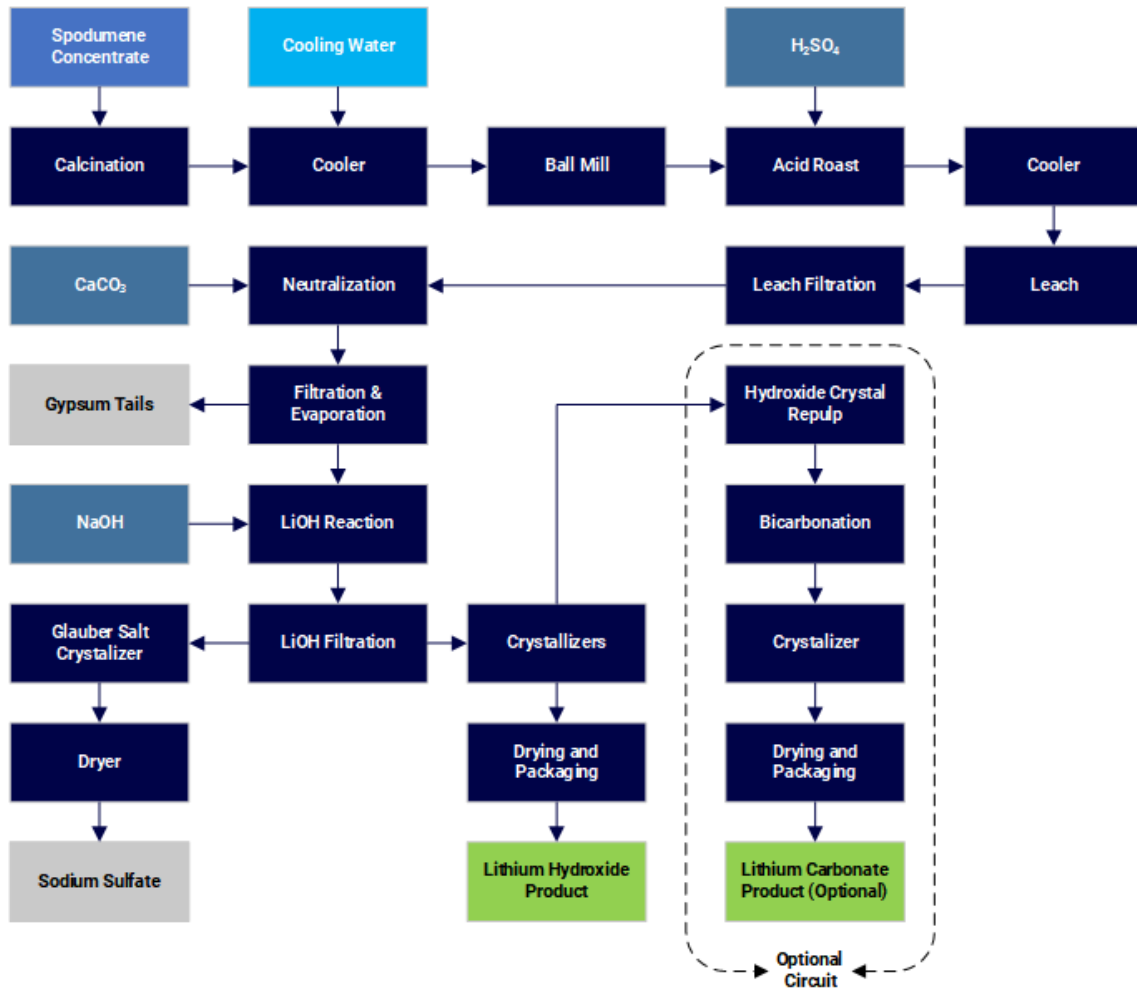


Figure 10 – Proposed Lithium Hydroxide Chemical Plant Flowsheet

## Site Plans

### Mining Operations

A preliminary integrated site plan including mining operations, waste disposal, and concentrator was developed by Marshall Miller and Primero Group during the course of this Scoping Study. The site plan has been developed to a pre-feasibility level of detail and with sufficient definition to acquire permits (Figure 11).

### Concentrator Site

The concentrator is located to the northwest of the planned open pits. The location of the concentrator has been updated based on the results of condemnation drilling and preliminary geotechnical investigation. (Figure 12).

### Chemical Plant Site

Piedmont has secured a 60.6-acre property in King’s Mountain, North Carolina as a proposed site for the Chemical Plant. The site is a 20 mile truck haul from the planned mine site and is accessible by a combination of NC state highways, US-highways, and US Interstate.

An indicative site plan for the Chemical Plant was developed as part of the Scoping Study (Figure 13).





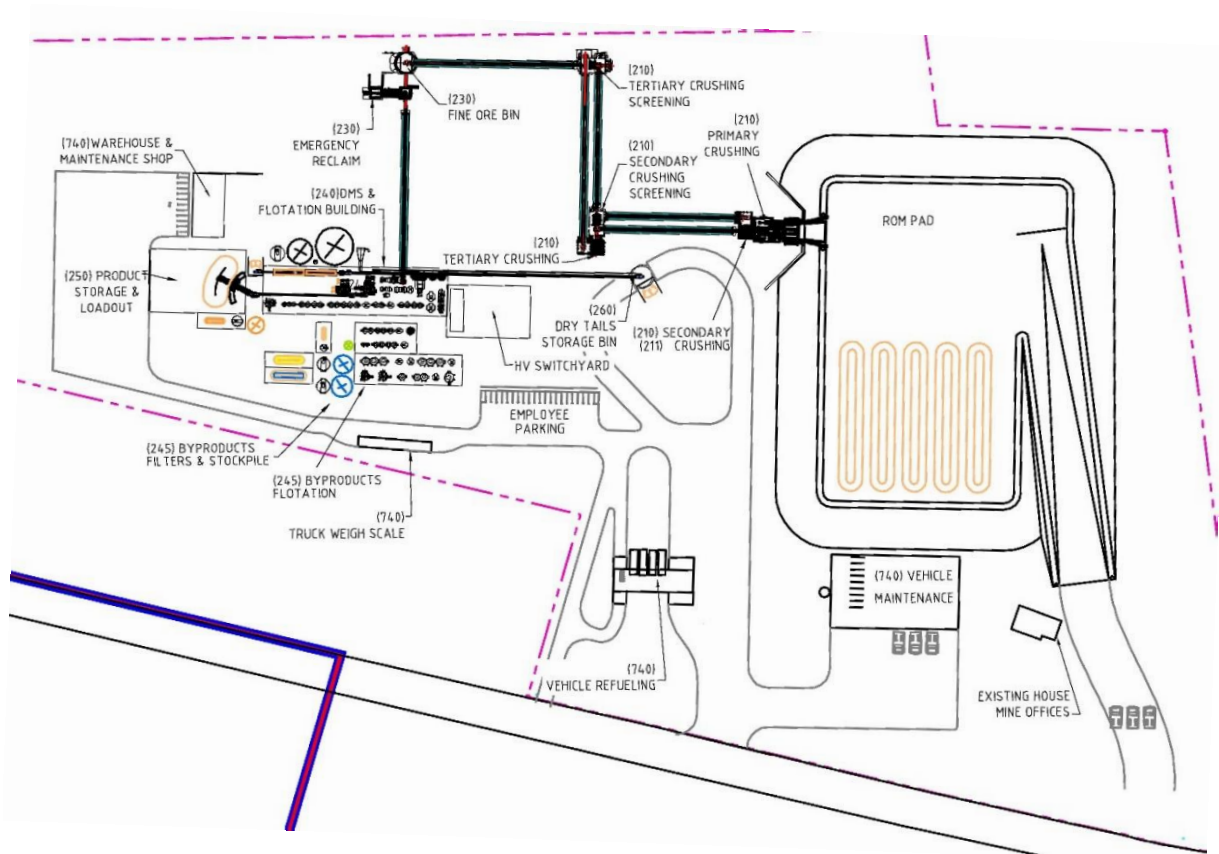


Figure 12 – Piedmont Lithium Concentrator Plot Plan

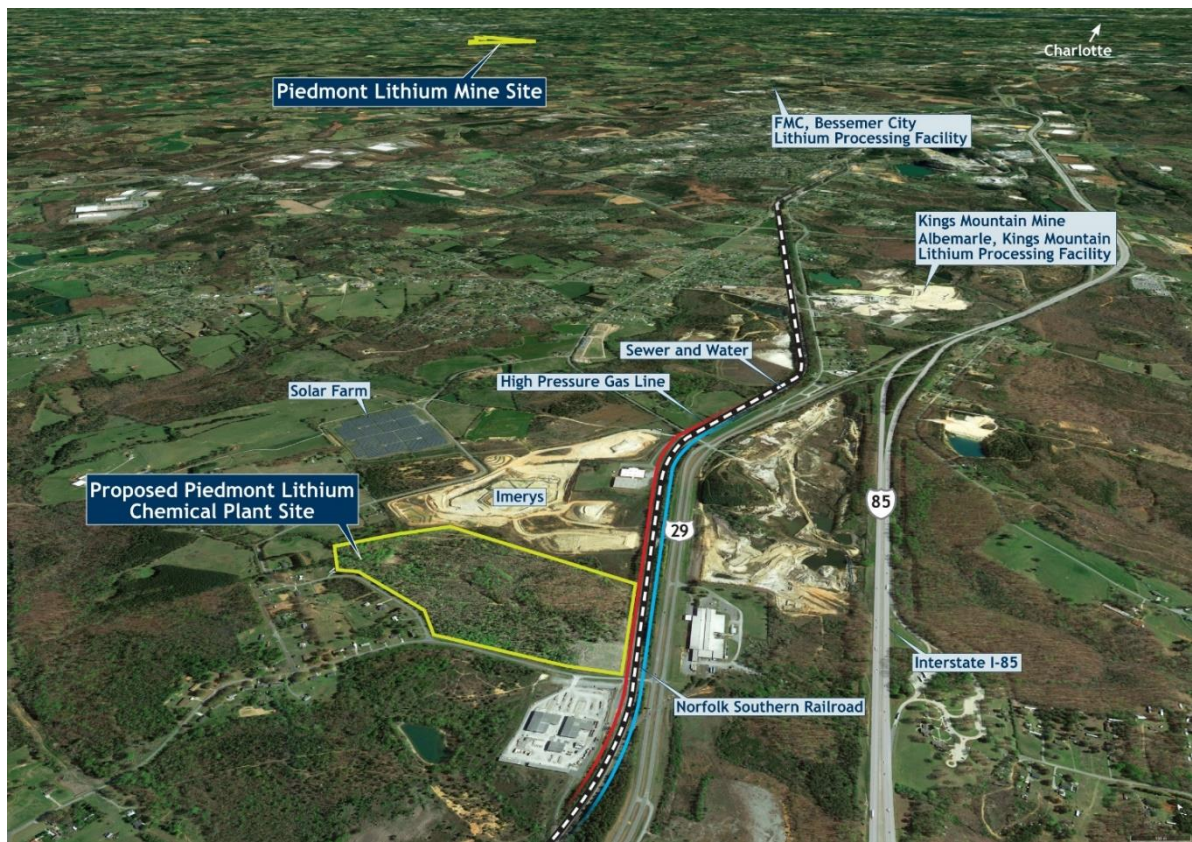
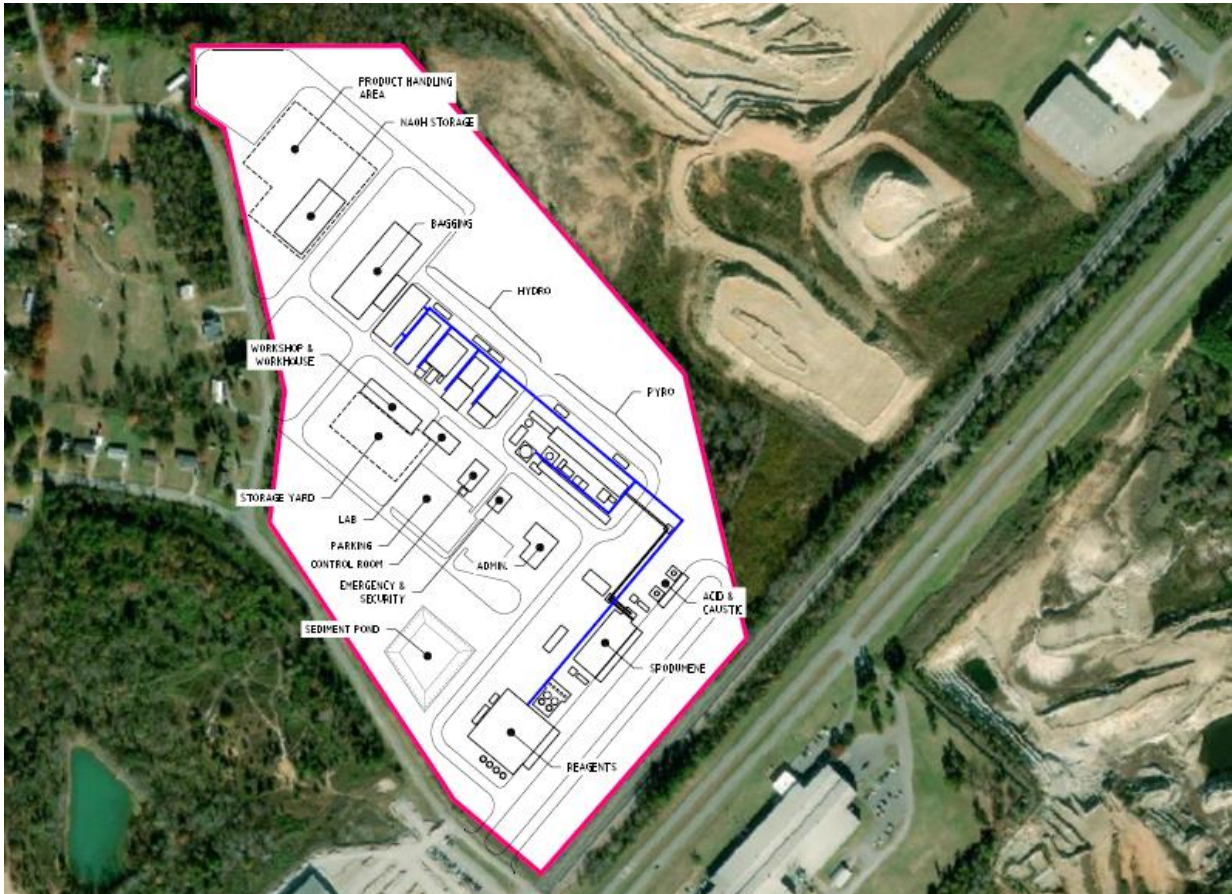


Figure 13 – Location of Proposed Piedmont Lithium Chemical Plant



**Figure 14 – Indicative Site Plan of Piedmont's Proposed 22,700 t/y Lithium Hydroxide Plant**

## Infrastructure

The Piedmont Lithium Project holds a superior infrastructure position relative to most lithium projects globally. The proposed mine site is approximately 25 miles west of Charlotte, North Carolina. The mine site is directly accessible by multiple state highways and is in close proximity to US Highway 321 and US Interstate I-85.

The project has close access to Class I railroads Norfolk Southern and CSX Transportation. These are the two largest rail operators in the Eastern United States and have main lines which are 20 miles and 4 miles from the mine site, respectively. The Mine/Concentrator and Chemical Plant sites are in proximity to four (4) major US ports:

- Charleston, SC - 197 miles
- Wilmington, NC - 208 miles
- Savannah, GA - 226 miles
- Norfolk, VA - 296 miles

Charlotte-Douglas International Airport is 20 miles from the mine site and 32 miles from the proposed Chemical Plant site. It is the 6<sup>th</sup> largest airport in the United States and has direct international routes to Canada, the Caribbean, South America, and Europe.

Temporary or permanent camp facilities will not be required as part of the project. Furthermore, Livent Corporation and Albemarle Corporation operate lithium chemical plants in close proximity to the proposed Piedmont operations, and the local region is well serviced by fabrication, maintenance, and technical service contractors experienced in the sector.

## Logistics

Most spodumene concentrate produced by Piedmont will be consumed by the Piedmont Chemical Plant. A US\$6.00/t cost is included in the financial model for the 20-mile transport between the Mine/Concentrator and Chemical Plant. For third-party spodumene concentrate sales Piedmont has assumed a US\$75/t freight cost from mine gate to CIF China delivery.

North Carolina is a significant producer of quartz, feldspar and mica. Piedmont has assumed current by-product pricing based on FOB mine gate terms, and that given Piedmont's location within the mid-Atlantic industrial corridor and existing industrial mineral consumers that by-products can be delivered by truck or rail on a cost-competitive basis to regional customers.

## Environmental and Social Impact Assessment

HDR Engineering has been retained by Piedmont to support permitting activities on the project. In December 2018 the Company submitted a Section 404 Standard Individual Permit application to the US Army Corps of Engineers (USACE) for the Project.

The Company also concurrently submitted an application for a Section 401 Individual Water Quality Certification to the North Carolina Division of Water Resources (NCDWR). The Section 404 and 401 permits are typical requirements for the type of operation proposed by Piedmont Lithium.

Piedmont has received comments from agencies and the public for these permit applications and provided written responses in Q2 2019. Approval of both applications is expected within 2019.

A mining permit application and rezoning application will be submitted to the state of North Carolina and Gaston County, respectively, in the coming months.

Background studies undertaken in support of permit applications have been constructive, and the conclusions reached in each individual study to date have met the requirements which would normally support permit approval.

The following environmental, field investigation and social studies have been concluded on the project:

- Threatened and endangered species surveys, which concluded that no federally protected species occur on the Project site
- A detailed cultural resources survey including a comprehensive archaeological investigation of the Mine/Concentrator site was undertaken. Cultural resources surveys which concluded that no properties listed in or eligible for listing in the National Register of Historic Places would be adversely affected by the Project.
- Hydrogeological modeling
- Ground and surface water monitoring which will continue for a minimum of 12 months prior to the start of construction on the Project
- Waste rock characterization including acid/base accounting and neutralization potential which indicated that the waste rock from the project does not have the potential to be acid forming
- Traffic analysis

HDR performed a fatal flaw analysis of the proposed Chemical Plant site including a preliminary site survey. The proposed site is already zoned heavy-industrial.

Piedmont maintains an active community engagement program including local, state, and federal elected officials, community groups, private individuals, and local media. Community engagement will continue through the permitting, development, and operations phases of the Project.

In 2019, United States Senator Lisa Murkowski (chair of the Senate Committee on Energy and Natural Resources) introduced bipartisan legislation aimed at improving United States critical minerals security through reduction in dependence on foreign suppliers. The Senate Energy and Natural Resource Committee approved this legislation in July 2019.

# Marketing

## Lithium Demand and Supply Outlook

Lithium demand is expected to grow rapidly due to increasing requirements for lithium-ion batteries used in electric vehicles (“EVs”) and in energy storage applications. Approximately 60% of lithium is currently consumed in batteries for EVs and consumer products, with the remainder being used in traditional applications in ceramics, glass, grease and other industrial applications. Many industry observers expect EV penetration to grow from approximately 2% in 2018 to 8%-10% in 2025, driving lithium demand from approximately 280,000t in 2018 to over 1,000,000t by 2025-2028. Roskill, a leading international consultancy, projects EV sales to increase by 26% per year in the years to 2028, with global plug-in vehicle sales (BEV and PHEV) expected to reach 32 million annual units by 2028 and continuing to grow rapidly in subsequent years. EV demand has grown approximately 60% in the years since 2010, driven in part by the dramatic reduction in the cost of lithium-ion batteries over that time period.

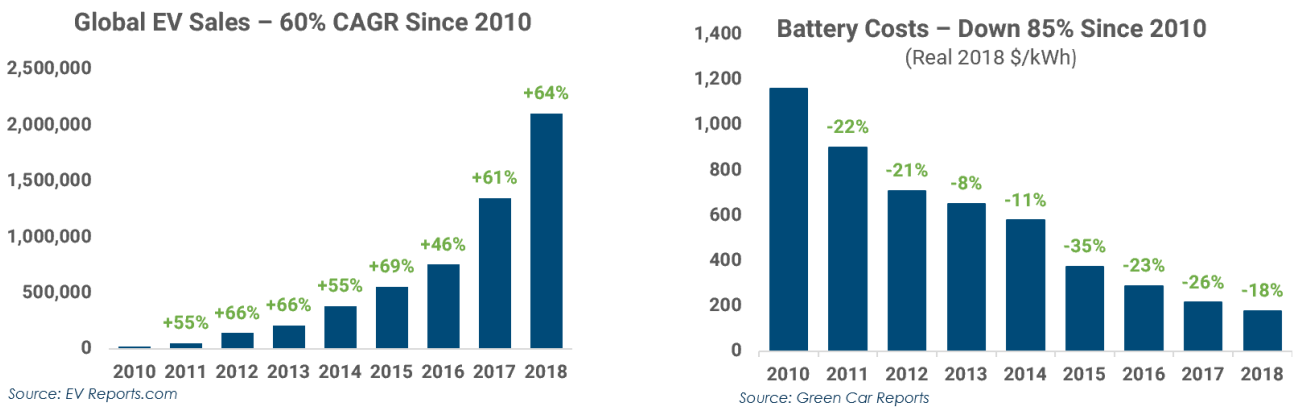
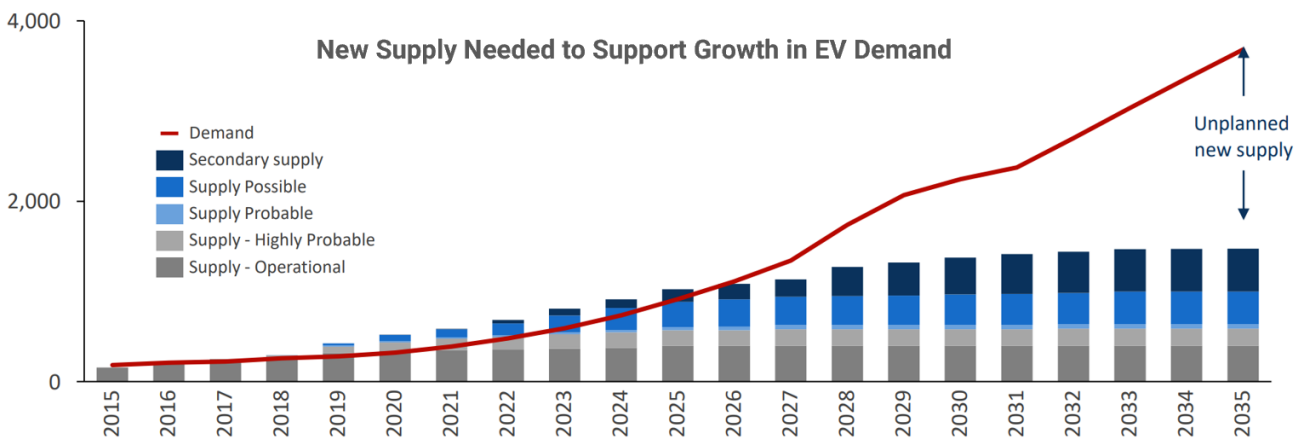


Figure 15 – Global EV Sales Growth Compared with Battery Costs (Real Basis) 2010-2018

Lithium supply has thus far grown to keep up with demand, with three new Australian spodumene projects commencing operation in 2018 along with organic growth at certain incumbent hard-rock and brine producers. Lithium chemical conversion capacity has also grown, particularly amongst the leading Chinese producers. This supply response has led to a renewed supply-demand balance such that lithium prices have retreated from the all-time highs of 2017-2018 to what some observers consider the ‘new normal’ prices being experienced currently.

Longer-term, while there are numerous lithium development projects at different stages of evaluation, many industry observers expect ore quality, economic, permitting and financing considerations will lead to a shortage of lithium production, particularly of battery quality, in the years most relevant to the Project.



Source: Benchmark Minerals Intelligence

Figure 16 – Forecast Refined Lithium Output and Demand 2019-2035 (Benchmark Minerals Intelligence)

## Marketing Strategy

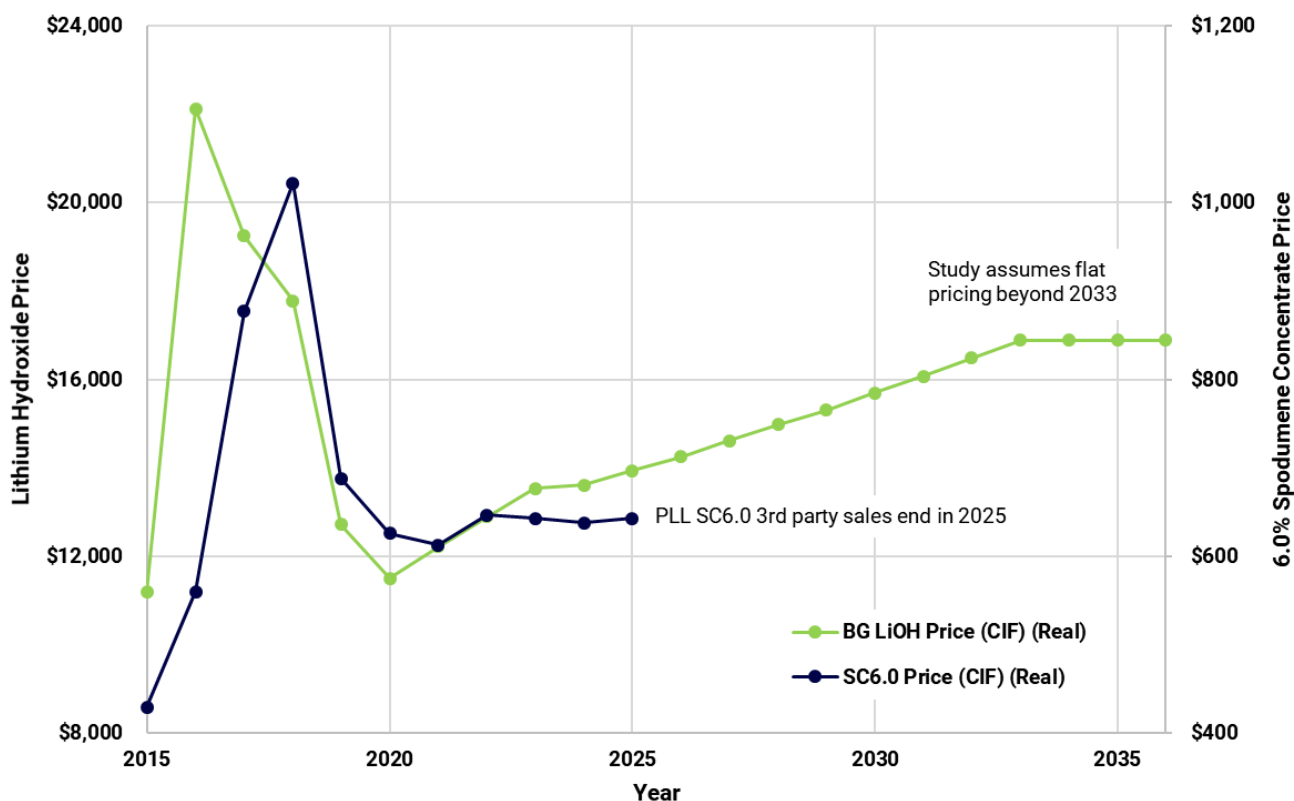
Piedmont is focused on establishing strategic partnerships with customers of both high quality spodumene concentrate and battery grade lithium hydroxide. Piedmont will concentrate this effort on the growing North American EV supply chain, particularly in light of the growing commitments to US battery manufacturing by groups such as Tesla, SK Innovation, LG, Daimler and others.

## Product Pricing

Piedmont has used Roskill's long-term price forecasts as the basis for this Scoping Study. Roskill is a leading chemical industry consultancy, and their price forecasts have been used in public filings over the past twelve months by industry participants including Tianqi, Livent, Kidman, Pilbara and Ioneer. Roskill's (real) price forecasts for 6.0% Li<sub>2</sub>O spodumene concentrate for the relevant years of spodumene sales in this Scoping Study and Roskill's (real) pricing for battery grade lithium hydroxide for the life of the Piedmont project are depicted in Figure 17.

Notably, and despite Roskill's expectations of a long-term lithium supply deficit in, the long-term prices used in the Scoping Study do not reach the peak pricing experienced in the 2016-2018 period.

**Product Pricing Real Terms 2015-2033+ (Roskill)**



**Figure 17 – Battery Grade Lithium Hydroxide and SC-6.0 Concentrate Pricing 2018-2033 (Roskill)**

## By-Products

Piedmont proposes to produce quartz, feldspar and mica as by-products of spodumene concentration. CSA Global evaluated Piedmont's by-product metallurgical testwork results, planned production volumes, and potential market applications. Table 13 illustrates summary market opportunities for Piedmont Lithium's by-product output.

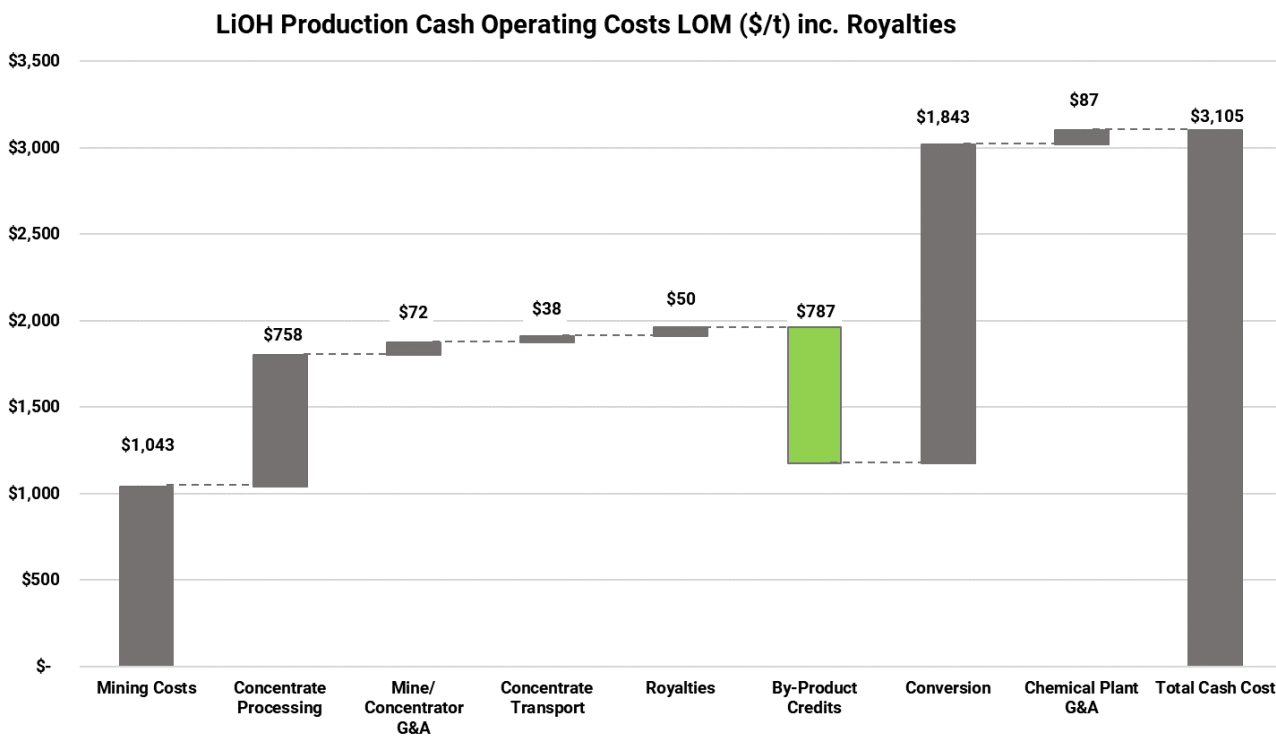
By-product	Annual Volume (t/y)	Assumed Average Sales Price (US\$/t)	CSA Global Indicative Price Range (US\$/t)	Markets
Quartz	99,000	\$100	\$70-\$100	Low-iron glass including solar panel cover glass and others, industrial ceramics.
Feldspar	125,000	\$75	\$75-\$85 (chips); \$130 (powder)	Glass, frit, and industrial ceramics.
Mica	15,500	\$50	\$270-\$350	Specialty paints including automotive, filler uses, joint compound.

Based on the results of bench-scale testwork, by-products from Piedmont’s lithium operations are expected to have low-iron content, which will be desirable in many industrial applications.

## Economics

### Operating Costs

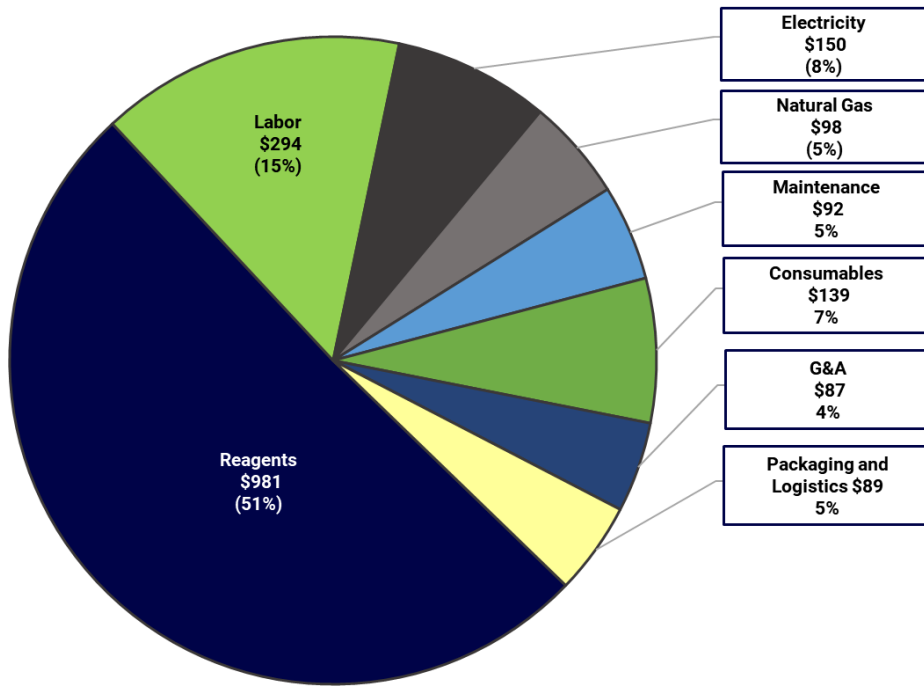
Piedmont forecasts operating costs for lithium hydroxide based on a self-supply of spodumene concentrate during the life of mining operations. Excess spodumene concentrate sales during ramp-up of chemical operations are applied as a co-product credit to lithium hydroxide cash costs. Early spodumene sales prior to Chemical Plant commissioning are excluded from the by-product credits (Figure 18).



**Figure 18 – Lithium hydroxide production cash operating costs life of mine**

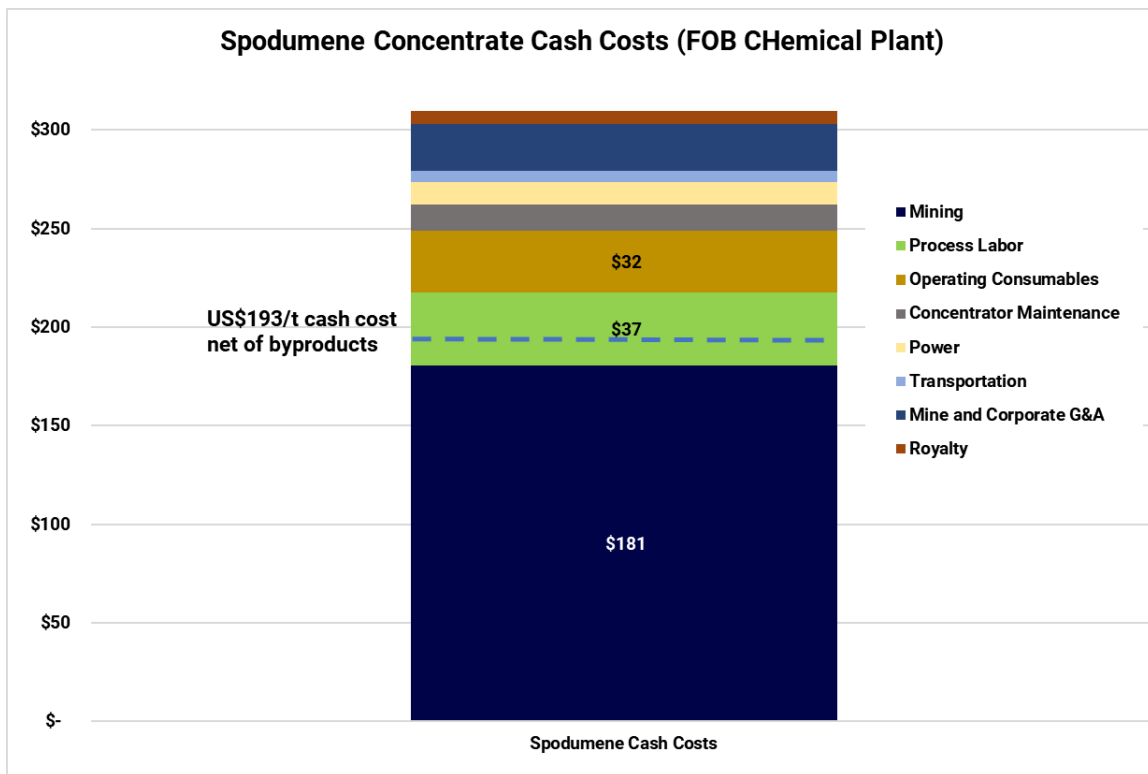
Figure 19 shows the breakdown of lithium hydroxide conversion cash costs, excluding spodumene concentrate supply, by major cost center.

**Steady-State LiOH Conversion Cash Costs (US\$/t)**



**Figure 19 – Cash costs for lithium hydroxide conversion during steady-state conditions (22,700t/y)**

Cash operating costs for spodumene mining and concentration were estimated at an average of US\$ 199/t net of by-product credits delivered to the Chemical Plant site in King’s Mountain. The estimated cost is inclusive of G&A associated with mining operations, royalties and transportation. A breakdown of spodumene mining and concentration costs is shown in Figure 20.



**Figure 20 – Cash operating costs for spodumene concentrate life of mine (\$/t) (160,000t/y)**



## Capital Costs

Piedmont estimates the capital cost to construct the mine and concentrator at US\$106.2M, excluding contingency, land expenses, owner's costs, and working capital. The sustaining capital includes the costs for financed mobile equipment including rebuild and replacement costs through the 25-year mine life.

Table 14 highlights the total estimated capital expenditures for the Mine/Concentrator. A 20% contingency has generally been carried on costs in the economic modelling of the Mine/Concentrator project except where contracted values, such as land expenses, have been defined.

<b>Cost Center</b>	<b>Life-of-mine total (US\$ million)</b>
Site establishment and bulk earthworks	\$13.8
Pre-stripping expenses	\$8.0
Process plant	\$63.3
Non-process infrastructure	\$3.9
Engineering, procurement, construction management (EPCM)	\$13.4
Construction indirects	\$2.3
Spares and commissioning	\$1.5
<b>Total</b>	<b>\$106.2</b>
Land acquisition	\$28.3
Owner's costs	\$11.3
<b>Total Initial Capital (Excluding Contingency)</b>	<b>\$145.8</b>
Contingency	\$22.1
<b>Total Development Capital</b>	<b>\$167.9</b>
Deferred and sustaining capital (including contingency)	\$147.9
Working capital (including contingency)	\$20.0

Piedmont estimates the capital cost to construct the Chemical Plant at US\$253M before owner's costs and contingency. A contingency of 30% has been carried in the economic modelling of the Chemical Plant project. Approximately US\$141M of free cash flow is expected to be generated prior to completion of construction of the Chemical Plant from sales of spodumene concentrate in early years.

<b>Cost Centre</b>	<b>Life-of-mine total (US\$ million)</b>
Contractor directs – Chemical Plant	\$208.4
Contractor indirects	\$37.5
Spares and commissioning	\$6.7
<b>Total</b>	<b>\$252.6</b>
Owner's Costs	\$12.1
Contingency	\$79.4
<b>Total Development Capital</b>	<b>\$344.1</b>
Development Capital to be funded from free cash flows	\$141.0
Development Capital to be funded from additional sources	\$203.1
Deferred and sustaining capital (including contingency)	\$86.5

## Royalties, Taxes, Depreciation, and Depletion

The Scoping Study project economics include the following key parameters related to royalties, tax, depreciation, and depletion allowances.

- Royalties of US\$1.00 per ROM tonne based on the average land option agreement
- North Carolina state corporate taxes are 2.5%
- Federal tax rate of 21% is applied and state corporate taxes are deductible from this rate
- Effective base tax rate of 22.975%
- Depletion allowance of 22% is applied to the spodumene concentrate sales price
- Depletion allowances for quartz, feldspar, and mica concentrates are 14%, 14% and 22%, respectively
- Depreciation is assumed as 80% within the first year of operations and 50% of the remaining balance in each subsequent year, with a 5% premium occurring in year 2

## Financial Modelling

A comprehensive economic model has been prepared which fully integrates Piedmont's Chemical Plant with its Mine/Concentrator. The Scoping Study assumes a Chemical Plant production life of 23 years commencing in year 3 of mining operations. The mining production target is approximately 25.6Mt at an average run of mine grade of 1.11% Li<sub>2</sub>O (undiluted) over a 25-year mine life. The overall project life is 25 years. Table 16 provides a summary of production and cost figures for the integrated project.

The current economic model assumes that 100% of initial capital costs for the Mine/Concentrator are incurred in the year prior to commissioning (Year 0), and that 50% of initial capital costs for the Chemical Plant are incurred in the year prior to commissioning, and 50% are incurred in the year of commissioning. The Mine/Concentrator is assumed to ramp to full production over a one-year period while the Chemical Plant is assumed to ramp to full production over a three-year period.

<b>Table 16: Piedmont Lithium Project – Life of Mine Integrated Project</b>	<b>Unit</b>	<b>Estimated Value</b>
<b>PHYSICAL – MINE/CONCENTRATOR</b>		
Mine/Concentrator Life	years	25
Steady-state annual spodumene concentrate production	t/y	160,000
LOM spodumene concentrate production	t	3,805,000
LOM quartz by-product production	t	1,865,000
LOM feldspar by-product production	t	2,710,000
LOM mica by-product production	t	267,000
LOM feed grade (excluding dilution)	%	1.11
LOM average concentrate grade	%	6.0
LOM average process recovery	%	85
LOM average strip ratio	waste:ore	10.4:1
<b>PHYSICAL – LITHIUM CHEMICAL PLANT</b>		
Steady-state annual lithium hydroxide production	t/y	22,700
LOM lithium hydroxide production	t	489,000
LOM concentrate supplied from Piedmont mining operations	t	3,100,000
Third party concentrate used in lithium hydroxide production	t	Nil
Chemical Plant Life	years	23
Commencement of lithium hydroxide chemical production	year	3

<b>Table 16: Piedmont Lithium Project – Life of Mine Integrated Project</b>	<b>Unit</b>	<b>Estimated Value</b>
<b>OPERATING AND CAPITAL COSTS – INTEGRATED PROJECT</b>		
Average LiOH production cash costs using self-supplied concentrate	US\$/t	\$3,105
Mine/Concentrator - Direct development capital	US\$M	\$106.2
Mine/Concentrator - Owner's costs	US\$M	\$11.3
Mine/Concentrator – Land Acquisition Costs	US\$M	\$28.3
Mine/Concentrator – Contingency <sup>1</sup>	US\$M	\$22.1
Mine/Concentrator – Sustaining and deferred capital (inc. contingency)	US\$M	\$147.9
Chemical Plant - Direct development capital	US\$M	\$252.6
Chemical Plant – Owner's Costs	US\$M	\$12.1
Chemical Plant – Contingency <sup>1</sup>	US\$M	\$79.4
Chemical Plant – Sustaining and deferred capital	US\$M	\$86.5
<b>FINANCIAL PERFORMANCE – INTEGRATED PROJECT – LIFE OF PROJECT</b>		
<b>Annual Steady State EBITDA</b>	<b>US\$M/y</b>	<b>\$240-\$340</b>
<b>Annual Steady State After-Tax Cash Flow</b>	<b>US\$M/y</b>	<b>\$190-\$260</b>
<b>Net operating cash flow after tax</b>	<b>US\$M</b>	<b>\$5,370</b>
<b>Free cash flow after capital costs</b>	<b>US\$M</b>	<b>\$4,630</b>
<b>After Tax Internal Rate of Return (IRR)</b>	<b>%</b>	<b>34</b>
<b>After Tax Net Present Value (NPV) @ 8% discount rate</b>	<b>US\$M</b>	<b>\$1,447</b>

1. Contingency was applied to all direct and indirect costs at a rate of 20% (Mine/Concentrator) and 30% (Chemical Plant).

## Payback Period

Payback periods for the Mine/Concentrator and Chemical Plant are approximately 2.4 years and 2.3 years, respectively. The payback periods are based on free-cash flow, after taxes.

## Sensitivity Analyses

The Mine/Concentrator component of the Scoping Study has been designed to a PFS level of detail with an accuracy of  $\pm 25\%$ . The Chemical Plant component of the Scoping Study was prepared at a  $\pm 35\%$  level of accuracy to investigate the technical and economic parameters of a fully-integrated lithium chemical operation located within the TSB. Key inputs into the Scoping Study have been tested by the following sensitivities (Figure 21 and Figure 22).

### After Tax NPV8 Sensitivity Analysis for the Piedmont Lithium Project

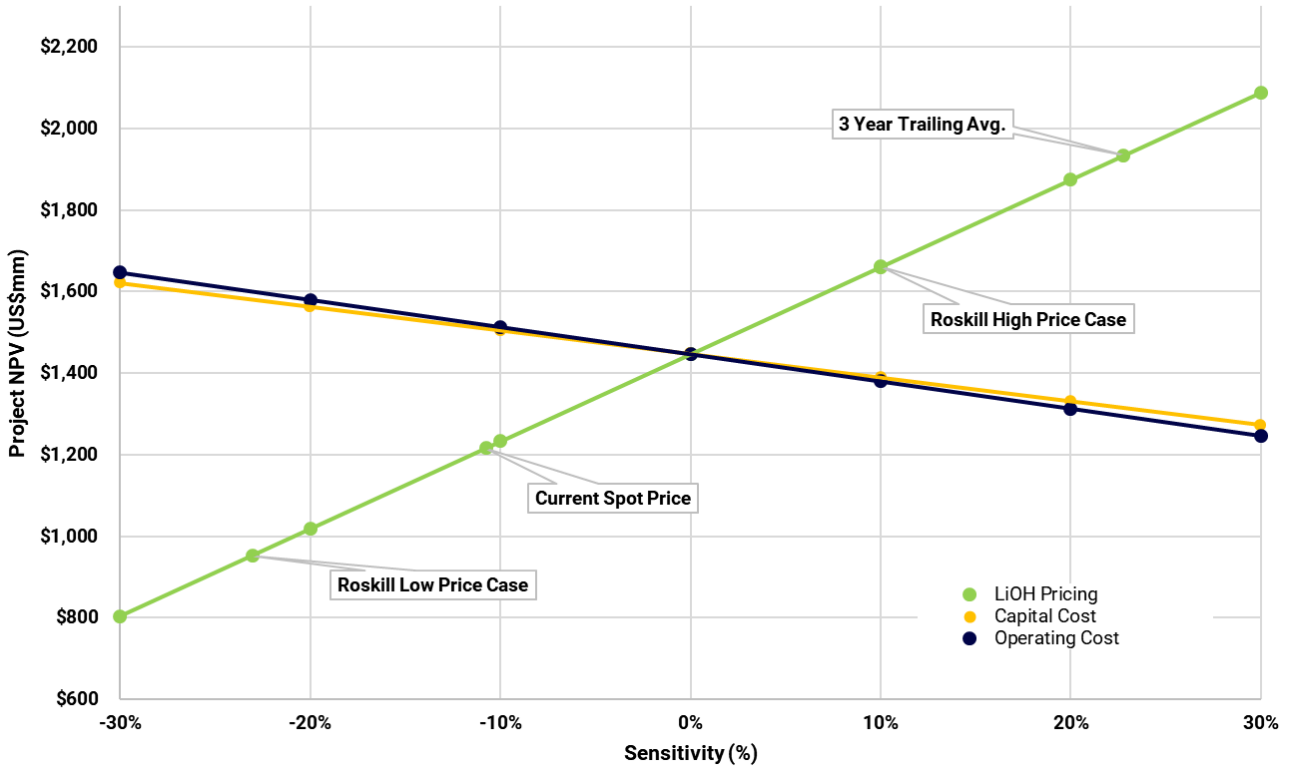


Figure 21 – Net Present Value Sensitivity Analysis for the Piedmont Lithium Project

### After Tax IRR Sensitivity Analysis for the Piedmont Lithium Project

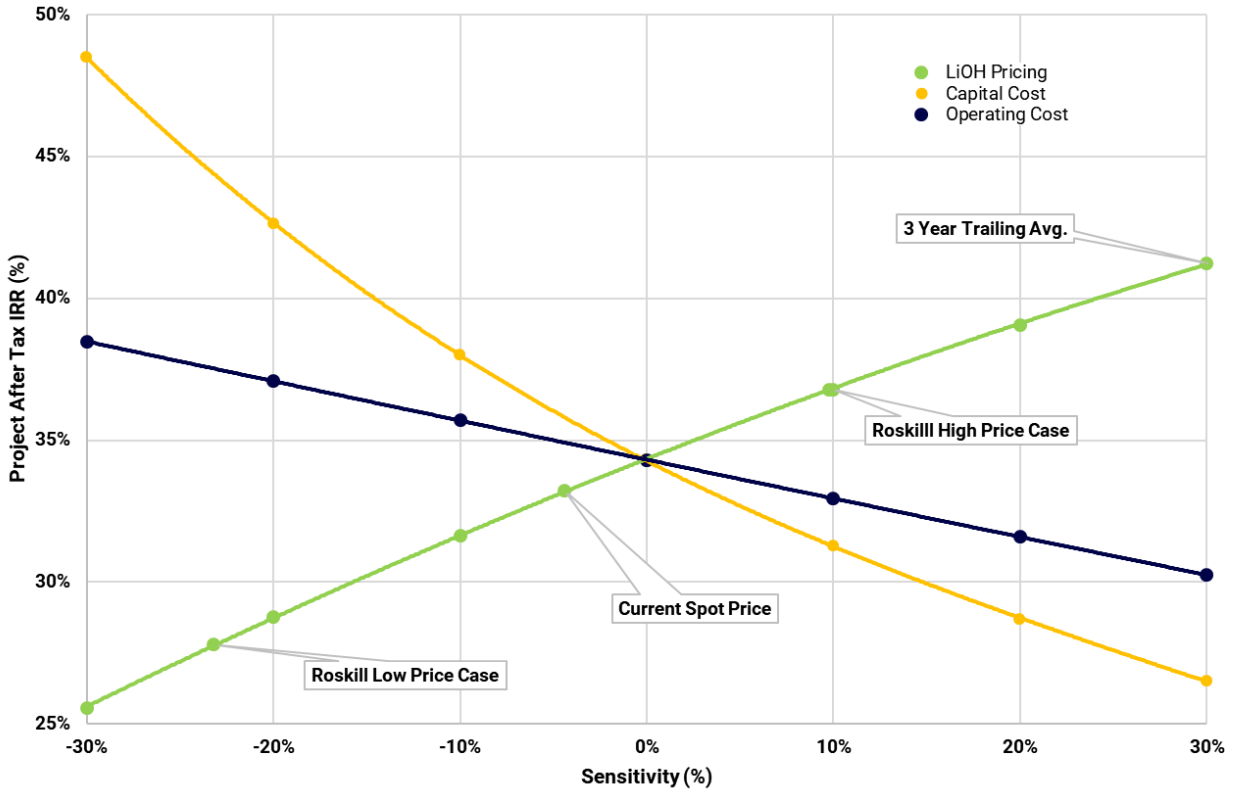


Figure 22 – Internal Rate of Return Sensitivity Analysis for the Piedmont Lithium Project

## Next Steps

The Company has identified the following near-term opportunities to add value to the Project:

- Continue Phase 4 drilling and expansion of the Company's land position in the Carolina Tin-Spodumene Belt with a view to further enhancing the scale of the Project;
- Complete permit applications and secure the necessary permits and approvals to commence mining and processing operations at the Project;
- Accelerate the development of the Company's proposed lithium hydroxide chemical plant including metallurgical testwork for the conversion of spodumene concentrate produced from Piedmont ore;
- Commence a detailed market study of the important US quartz, feldspar and mica markets;
- Formalize our dialogue with a number of prospective strategic, technical and offtake partners.

## Conclusions

Piedmont is pleased to present a Scoping Study that clearly demonstrates the advantages of locating a vertically-integrated lithium business in North Carolina, USA. The Scoping Study supports the Company's first-mover position to restart hard rock lithium mining operations in the historic Carolina Tin-Spodumene Belt where the access to infrastructure, labor, low costs, and favorable tax and royalty regimes contribute to robust Project economics.

As the only conventional lithium project under development in the United States, Piedmont Lithium has the potential to offer the market diversification from current lithium supply sources. The Project meets an important strategic need for domestic US lithium production and will confer substantial economic benefits to the local region.

The addition of by-product credits to the Project's economics are made possible by Piedmont's location within the industrial heartland of the mid-Atlantic United States. The benefits which by-product credits convey onto the project will ensure Piedmont's highly competitive cost position within the growing lithium chemical industry.

The update of the concentrator process flow diagram to include dense medium separation as well as flotation provides improvement in concentrator operator costs and potentially derisks commissioning and ramp up of the Mine and Concentrator.

## 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 Mineral 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"). However, these terms are not defined in Industry Guide 7 ("SEC Industry Guide 7") under the U.S. Securities Act of 1933, as amended (the "U.S. Securities Act"), and are normally not permitted to be used in reports and filings with the U.S. Securities and Exchange Commission ("SEC"). Accordingly, information contained herein that describes Piedmont's mineral deposits may not be 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 closely the disclosure in Piedmont's Form 20-F, a copy of which may be obtained from Piedmont or from the EDGAR system on the SEC's website at <http://www.sec.gov>.

## Competent Persons Statements

The information in this report 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 a consultant to 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 the 'Association of Professional Geoscientists of Ontario' (APGO no. 2348), a 'Recognized Professional Organization' (RPO). Mr. McGarry is a Senior Resource Geologist and full-time employee at CSA Global Geoscience Canada Ltd. 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.

The information in this announcement that relates to Metallurgical Testwork Results, Process Design, Process Plant Capital Costs, and Process Plant Operating Costs is based on, and fairly represents, information compiled or reviewed by Mr. Kiedock Kim, a Competent Person who is a Registered Member of 'Professional Engineers Ontario', a 'Recognized Professional Organization' (RPO). Mr. Kim is full-time employee of Primero Group. Mr. Kim 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 Mineral Resources and Ore Reserves'. Mr. Kim consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Mining Engineering and Mining Schedule is based on information compiled by Mr. Chris Scott and reviewed by Dr. Steven Keim, both of whom are employees of Marshall Miller and Associates (MM&A). Dr. Keim takes overall responsibility as Competent Person for the portions of the work completed by MM&A. Dr. Steven Keim is a Competent Person who is a Registered Member of the 'Society for Mining, Metallurgy & Exploration Society', a 'Recognized Professional Organization' (RPO). Dr. Keim has sufficient experience, which is relevant to the style of mineral extraction under consideration, and to the activity he is undertaking, to qualify as Competent Person in terms of the JORC Code (2012 Edition). Dr. Keim has reviewed this document and consents to the inclusion in this report of the matters based on his information in the form and context within which it appears.

## SUMMARY OF MODIFYING FACTORS AND MATERIAL ASSUMPTIONS

The Modifying Factors included in the JORC Code (2012) have been assessed as part of the Scoping Study, including mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and government factors. The Company has received advice from appropriate experts when assessing each Modifying Factor.

A summary assessment of each relevant Modifying Factor is provided below.

<p><b>Mining</b></p>	<p>Refer to section entitled 'Mining and Production Target' in the Announcement.</p> <p>The Company engaged independent engineers Marshall Miller to carry out pit optimizations, mine design, scheduling, and waste disposal. Modelling and pit sequencing were compiled by Mr. Chris Scott, a Senior Engineer with Marshall Miller.</p> <p>The mine design is based on an open pit design assuming the following wall design configuration for oxide and overburden material in this Scoping Study:</p> <ul style="list-style-type: none"> <li>• Batter face angle of 45 degrees</li> <li>• Batter height of 10 vertical meters</li> <li>• Berm width of 0 meters</li> <li>• Overall slope angle of 45 degrees.</li> </ul> <p>The following wall design configuration was used for fresh material in this Scoping Study:</p> <ul style="list-style-type: none"> <li>• Batter face angle of 75 degrees</li> <li>• Batter height of 24 vertical meters</li> <li>• Berm width of 9.5 meters</li> <li>• Overall slope angle of 52 degrees, which includes a ramp width of 30 meters.</li> </ul> <p>The pit wall design parameters indicated above are based on the results of a preliminary geotechnical assessment that utilized available fracture orientation measurements from exploration drilling and downhole geophysical logging, along with laboratory results for intact rock strength.</p> <p>Production schedules have been prepared for the Piedmont Lithium Project based on the following parameters:</p> <ul style="list-style-type: none"> <li>• Target a process plant output of 160 kt/y of 6% Li<sub>2</sub>O concentrate</li> <li>• Plant throughput of 1.15 Mt/y</li> <li>• Approximately 70% of production will be achieved in Year 1 of operations</li> <li>• Mine dilution of 5%</li> <li>• Mine recovery of 95%</li> <li>• Processing recovery of 85%</li> <li>• A mining sequence targeting maximized utilization of Indicated resources at the front end of the schedule</li> <li>• Annual scheduling periods.</li> </ul> <p>It is planned that conventional drill and blast, load and haul open pit mining will be used to extract the mineralized material. ROM feed will be defined by grade control procedures in the pit and delivered by truck to the ROM pad located next to the processing facility.</p> <p>It is planned that site development and pre-strip activities will be carried out by an experienced earthmoving contractor.</p> <p>Costs carried in the Scoping Study assume an owner-performed mining operation with an OEM financed mine fleet.</p>
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	<p>No alternative mining methods were considered in this Scoping Study.</p> <p>Concentrator tailings will be co-disposed with waste rock from mining operations. The disposal method will not require the construction of a tailings impoundment.</p> <p>No other tailings disposal methods were considered in this Scoping Study.</p> <p>The initial production target is approximately 160,000t of 6.0% (Li<sub>2</sub>O) or greater spodumene concentrate which will convert to 22,700t of lithium hydroxide monohydrate. This equates to approximately 1.15Mt of ore processed per year totaling 25.6Mt grading at 1.05% (fully diluted) Li<sub>2</sub>O over 25 years. The production target was derived from selection of the SimSched shell which provided the best estimate NPV.</p> <p>The Company has concluded that it has reasonable grounds for disclosing a production target which includes an amount of Inferred material. Approximately 47% of the total life-of-mine plan relates to Inferred material, however 0% of the mine plan relates to Inferred material in years 1-3.</p> <p>Based on the advice from the relevant Competent Persons, the Company has a high degree of confidence that the Inferred Mineral Resources for the Project will upgrade to Indicated Mineral Resources with further infill drilling. As support for this, the Company's Indicated Mineral Resources have already increased by 5.4Mt (or 64%) from 8.5Mt @ 1.15% Li<sub>2</sub>O (in June 2018) to 13.9Mt @ 1.16 Li<sub>2</sub>O (in June 2019), such increase resulting from a large proportion of previously Inferred Mineral Resources being upgraded to Indicated Mineral Resources from infill drilling. In the unlikely event that the remaining Inferred Mineral Resources are not able to be upgraded, the Project's viability is not affected.</p> <p>The Project is located within the TSB and along trend to the Hallman Beam and Kings Mountain mines, which historically provided most of the western world's lithium between the 1950s and the 1980s. The TSB has been described as one of the largest lithium regions in the world. The TSB was the most important lithium producing region in the western world prior to the establishment of the brine operations in Chile and Argentina in the 1990s. Livent and Albemarle both historically mined the lithium bearing spodumene pegmatites from the TSB, with the historic Kings Mountain lithium mine being described as one of the richest spodumene deposits in the world by Albemarle.</p> <p>The lithium chemical plant mass balance assumes that 144,960t/y of 6.0% spodumene concentrate is required to achieve the production target. Excess concentrate produced each year after the lithium chemical plant achieves full capacity will be carried in inventory and consumed at the end of life-of-mine.</p>																																
<p><b>Processing (including Metallurgical)</b></p>	<p>Refer to sections entitled 'Metallurgy' and 'Process Design' in the Announcement.</p> <p>The Company engaged SGS laboratories in Lakefield, Ontario to complete variability and composite testwork on various flowsheet options using a combination of Dense Medium Separation (DMS) and flotation processing techniques.</p> <p>The summary results for the preferred flowsheet alternative are shown. Details of the testwork program and results were previously announced on July 17, 2019.</p> <table border="1" data-bbox="371 1682 1350 1944"> <thead> <tr> <th>Parameter</th> <th>DMS Results</th> <th>Locked Cycle Test Results</th> <th>Composite Sample Results</th> </tr> </thead> <tbody> <tr> <td>Feed Grade Li<sub>2</sub>O (%)</td> <td></td> <td></td> <td>1.11</td> </tr> <tr> <td>Concentrate Grade Li<sub>2</sub>O (%)</td> <td>6.42</td> <td>6.31</td> <td>6.35</td> </tr> <tr> <td>Fe<sub>2</sub>O<sub>3</sub> (%)</td> <td>0.97</td> <td>0.90</td> <td>0.93</td> </tr> <tr> <td>Na<sub>2</sub>O (%)</td> <td>0.56</td> <td>0.68</td> <td>0.63</td> </tr> <tr> <td>K<sub>2</sub>O (%)</td> <td>0.45</td> <td>0.52</td> <td>0.49</td> </tr> <tr> <td>CaO+ MgO + MnO (%)</td> <td>0.51</td> <td>1.25</td> <td>0.96</td> </tr> <tr> <td>P<sub>2</sub>O<sub>5</sub> (%)</td> <td>0.12</td> <td>0.46</td> <td>0.32</td> </tr> </tbody> </table>	Parameter	DMS Results	Locked Cycle Test Results	Composite Sample Results	Feed Grade Li <sub>2</sub> O (%)			1.11	Concentrate Grade Li <sub>2</sub> O (%)	6.42	6.31	6.35	Fe <sub>2</sub> O <sub>3</sub> (%)	0.97	0.90	0.93	Na <sub>2</sub> O (%)	0.56	0.68	0.63	K <sub>2</sub> O (%)	0.45	0.52	0.49	CaO+ MgO + MnO (%)	0.51	1.25	0.96	P <sub>2</sub> O <sub>5</sub> (%)	0.12	0.46	0.32
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The composite samples were prepared to approximate the average grade of the Project's ore body. Overall lithium recovery during testwork for the preferred flowsheet was 77% at a grade of 6.35% Li<sub>2</sub>O. Simulations based on the testwork results support an overall plant design recovery of 85% when targeting a 6.0% Li<sub>2</sub>O spodumene concentrate product

Overall Li<sub>2</sub>O recovery of 85% is used in the Scoping Study. It is acknowledged that laboratory scale testwork will not always represent the actual results achieved from a production plant in terms of grade, recovery, or iron content. Further pilot plant scale testwork will be required to gain additional confidence of specifications and recoveries that will be achieved at full-scale production.

For detailed by-product metallurgical testwork results in bench-scale refer to the 'Metallurgy' and 'Process Design' sections of this Announcement and the detailed testwork results previously announced on September 4, 2018.

The summary results of bench-scale flotation for by-product qualities are shown. These results were produced from multiple samples of spodumene flotation tailings composited into by-product circuitry feed material.

Bench Scale Quartz Concentrate Results			
Parameter	Sample B	Sample F	Sample G
% SiO <sub>2</sub>	99.8	99.7	99.7
% Al <sub>2</sub> O <sub>3</sub>	0.10	0.10	0.14
% K <sub>2</sub> O	0.026	0.022	0.029
% Na <sub>2</sub> O	0.05	0.06	0.06
% CaO	<0.01	<0.01	<0.01
% Fe <sub>2</sub> O <sub>3</sub>	0.01	0.01	<0.01
% Li <sub>2</sub> O	0.013	0.011	0.013
% MgO	0.05	0.05	0.03
% MnO	<0.008	<0.008	<0.008
% P <sub>2</sub> O <sub>5</sub>	0.007	0.005	0.007
% TiO <sub>2</sub>	<0.0010	<0.0010	<0.0010

Bench Scale Feldspar Concentrate Results			
Parameter	Sample B	Sample F	Sample G
% SiO <sub>2</sub>	68.9	68.8	68.8
% Al <sub>2</sub> O <sub>3</sub>	18.5	18.6	18.6
% K <sub>2</sub> O	3.99	3.81	3.84
% Na <sub>2</sub> O	8.35	8.45	8.49
Total Na <sub>2</sub> O+K <sub>2</sub> O	12.34	12.26	12.33
% CaO	0.07	0.12	0.08
% Fe <sub>2</sub> O <sub>3</sub>	0.02	0.01	0.02
% Li <sub>2</sub> O	0.026	0.019	0.047
% MgO	<0.01	<0.01	<0.01
% MnO	<0.008	<0.008	<0.008
% P <sub>2</sub> O <sub>5</sub>	0.151	0.154	0.150
% TiO <sub>2</sub>	<0.0010	<0.0010	<0.0010

	Bench Scale Mica Physical Properties Results														
	Parameter	Unit	Optimized Value												
	Particle Size	Medium to Very Fine	60 – 325 Mesh												
	Bulk Density	g/cm <sup>3</sup>	0.681-0.682												
	Grit	%	0.70-0.79												
	Photovoltmeter	Green Reflectance	11.2-11.6												
	Hunter Value	± a [Redness(+), Greenness(-)]	0.27-2.27												
	Hunter Value	± b [Yellowness(+), Blueness(-)]	44.77-46.07												
	<p>The by-product recovery flowsheet involves desliming of the spodumene flotation tailings, mica flotation, iron removal by flotation, feldspar flotation followed by several stages of iron removal using WHIMS, and by-product concentrate dewatering.</p> <p>Overall metallurgical recovery of by-products was not calculated. The Company expects to process approximately one-third of the spodumene flotation tailings material and therefore the by-product process design is not sensitive to metallurgical recovery rates.</p>														
<b>Infrastructure</b>	<p>Refer to section entitled 'Infrastructure' in the Announcement.</p> <p>Piedmont's proximity to Charlotte, North Carolina effectively means that no regional infrastructure requirements exist outside of the non-process infrastructure associated with the Project located within the Project battery limits.</p> <p>The Scoping Study was managed by Primero Group. Primero Group is a leader in lithium processing with capabilities including technical study, detailed engineering, procurement, construction management, and contract operations. All infrastructure including on site non-process infrastructure related capital and operating costs were estimated by Primero Group.</p>														
<b>Marketing</b>	<p>Refer to section entitled 'Marketing' in the Announcement</p> <p>Piedmont has used lithium hydroxide pricing (real terms) from Roskill's long term price forecast published in July 2019.</p> <p>Piedmont has used spodumene concentrate CIF pricing (real terms) from Roskill's long term forecast published in July 2019. For the forecasted CIF pricing Piedmont has discounted this price by US\$75/t to represent an FOB mine gate price for the Project.</p> <p>Piedmont has established the following pricing for by-product concentrates based on information provided from the United States Geological Survey and marketability commentary from CSA Global following a preliminary evaluation of the Company's bench-scale metallurgical results for by-products.</p> <table border="1"> <thead> <tr> <th>By-product</th> <th>Annual Volume</th> <th>Average Sales Price</th> </tr> </thead> <tbody> <tr> <td>Quartz</td> <td>99,000</td> <td>\$100</td> </tr> <tr> <td>Feldspar</td> <td>125,000</td> <td>\$75</td> </tr> <tr> <td>Mica</td> <td>15,500</td> <td>\$50</td> </tr> </tbody> </table> <p>Piedmont will continue to focus on developing market relationships and discussions with potential off-take partners for both lithium products and industrial mineral by-products.</p>			By-product	Annual Volume	Average Sales Price	Quartz	99,000	\$100	Feldspar	125,000	\$75	Mica	15,500	\$50
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<b>Economic</b>	<p>Refer to sections entitled 'Economics' in the Announcement.</p> <p>Capital Estimates for the Concentrator and Lithium Chemical Plant have been prepared by Primero Group, a global expert in lithium processing, using a combination of cost estimates from suppliers, historical data, reference to recent comparable projects, and benchmarked construction costs for North Carolina, USA relative to other global lithium</p>														

producing jurisdictions. Costs are presented in real 2019 terms and are exclusive of escalation. The overall accuracy is deemed to be  $\pm 25\%$  for the Mine and Concentrator and  $\pm 35\%$  for the Chemical Plant.

Marshall Miller and Associates prepared the capital estimate for the mine including site development, mine infrastructure, fixed and mobile equipment, and pre-strip expenses. Mining equipment costs are based on OEM financing and are included in sustaining capital.

Capital costs include the cost of all services, direct costs, contractor indirects, EPCM expenses, non-process infrastructure, sustaining capital and other facilities used for the operation of the Mine/Concentrator and Chemical Plant. Capital costs make provision for mitigation expenses and mine closure and environmental costs. Capital costs do not make provision for the following:

- Social responsibility costs, although these would not be expected given the Project location

Working capital requirements prior to plant commissioning and full ramp up have been included in the capital estimate.

Cost information for the Mine and Concentrator have been estimated to a  $\pm 25\%$  level of accuracy. All other cost information has been estimated to a scoping study level of accuracy ( $\pm 35\%$ ). Costs are presented in real 2019 terms and are exclusive of escalation.

Mining costs have been estimated from first principles by Marshall Miller, a regional leader in mining and geology consulting engineering. Mining costs have been built up from first principles based on equipment, vendor, and contractor quotations, local unit cost rates, and benchmarked costs attributable to North Carolina, United States.

Processing and general & administrative costs have been estimated by Primero Group, a global leader in lithium processing. Processing costs are based on a combination of first principles build-up, direct supplier quotes, and experience on similar project with unit rates benchmarked to costs attributable to North Carolina, United States.

Labor costs have been developed based on a first-principles build-up of staffing requirements with labor rates from bench marks for the Charlotte, North Carolina region.

There are no government royalties associated with the project.

A royalty of US\$1.00 per ROM tonne delivered to the concentrator is applied to the project economics, and are included in the headline figure of \$199/t concentrate cash costs.

Rehabilitation and mine closure costs are included within the reported cash operating cost figures.

The reported cash operating costs do not make provision for the following:

- Corporate head office costs
- Social responsibility costs, although these are not expected in this jurisdiction

A detailed financial model and discounted cash flow (DCF) analysis has been prepared in order to demonstrate the economic viability of the Project. The financial model and DCF were modelled with conservative inputs to provide management with a baseline valuation of the Project.

The DCF analysis demonstrated compelling economics of the prospective integrated Project, with an NPV (ungeared, after-tax, at an 8% discount rate) of US\$1,447 million,

assuming a variable LOM lithium hydroxide price and a variable LOM spodumene concentrate price based on Roskill market forecasts, and an (ungeared) IRR of 34%.

The DCF analysis also highlighted the low operating costs, low royalties, and low corporate tax rates which potentially allow Piedmont to achieve high after-tax margins of over US\$10,000/t, or approximately 65%.

Sensitivity analysis was performed on all key assumptions used. The robust project economics insulate Piedmont's proposed integrated lithium chemical business from variation in market pricing, capital expense, or operating expenses. At a lithium hydroxide and spodumene concentrate price 30% lower than the Scoping Study prices the Project still displays a positive NPV of US\$662 million and IRR of 21%.

Payback periods for the Mine/Concentrator and Chemical Plant are 2.4 years and 2.3 years, respectively. The payback periods are based on free-cash flow, after taxes.

Piedmont estimates the stage 1 capital cost to construct the mine and concentrator to be US\$167.9 million (which includes a 20% contingency on most costs). Piedmont estimates the stage 2 capital cost to construct the chemical plant to be US\$344 million (which includes a 30% contingency on all costs). In respect of the stage 2 capital, approximately US\$141 million is expected to be generated in free cash flows from sales of spodumene concentrate in early years before completion of construction of the chemical plant. This leaves approximately US\$203 million in capital required for stage 2 capital cost to construct the chemical plant.

An assessment of various funding alternatives available to Piedmont has been made based on precedent transactions that have occurred in the mining industry, including an assessment of alternatives available to companies that operate in industrial and specialty minerals sector. Importantly, Piedmont expects its mine and concentrator to be operating and producing free cash flows when it comes to funding its stage 3 capital for construction of the chemical plant.

The Board has sought the advice of a suitably qualified financial services firm who, following the assessment of a number of key criteria, has confirmed in writing that, provided a definitive feasibility study arrives at a result not materially worse than the Scoping Study, the Company should be able to raise sufficient funding to develop the Project, subject to lithium market and global capital market conditions at the time not being worse than they are currently.

Since acquisition of the Piedmont Lithium Project in September 2016, the Company has completed extensive drilling, sampling and geophysical surveys to understand the geological setting and define spodumene resources within the Piedmont Project area. Over this period, with these key milestones being reached and the Project de-risked, the Company's market capitalization has increased from approximately A\$20 million to over A\$110 million. As the Project continues to achieve key develop milestones, which can also be significant de-risking events, the Company's share price is likely to increase.

The Company is debt free and is in a strong financial position, with approximately US\$16 million cash on hand, following completion of an institutional placement to raise net proceeds of approximately US\$14 million. The current strong financial position means the Company is soundly funded to continue the drilling, metallurgical testwork, and studies to further develop the project.

Piedmont has a high-quality Board and management team comprising highly respected resource executives with extensive finance, commercial and capital markets experience. The Directors have previously raised more than A\$1 billion from debt and equity capital markets for a number of exploration and development companies.

	<p>Piedmont's shares are listed on the Australian Securities Exchange ("ASX") and its American Depositary Receipts ("ADR's") are listed on the Nasdaq Capital Market ("NASDAQ"). Nasdaq is one of the world's premier venues for growth companies and provides increased access to capital from institutional and retail investors in the United States.</p> <p>As a result, the Board has a high level of confidence that the Project will be able to secure funding in due course, having particular regard to:</p> <ul style="list-style-type: none"> <li>• Required capital expenditure;</li> <li>• Piedmont's market capitalization;</li> <li>• Recent funding activities by Directors in respect of other resource projects;</li> <li>• Recently completed funding arrangements for similar or larger scale development projects;</li> <li>• The range of potential funding options available;</li> <li>• The favorable key metrics generated by the Project; and</li> <li>• Investor interest to date.</li> </ul>
<b>Environmental</b>	<p>Refer to the section entitled 'Environmental and Social Impact Assessment in the Announcement.</p> <p>In December 2018 the Company submitted a Section 404 Standard Individual Permit application to the US Army Corps of Engineers (USACE) for the Company's Piedmont Lithium Project.</p> <p>The Company also concurrently submitted an application for a Section 401 Individual Water Quality Certification to the North Carolina Division of Water Resources (NCDWR). The Section 404 and 401 permits are typical requirements for the type of operation proposed by Piedmont Lithium. HDR Engineering's Charlotte Office acted as lead consultant in the preparation of both applications.</p> <p>Piedmont has completed all necessary background studies required for the submission of all permit applications for the project as of July 2019.</p> <p>Additional land acquisitions for process infrastructure, waste disposal, and other facilities or buffer areas are required before the Company can submit a mining permit application and a rezoning application for the Project.</p>
<b>Social, Legal and Governmental</b>	<p>The Company has taken legal advice in relation to relevant Modifying Factors.</p> <p>The Project is located entirely within private lands. Piedmont engaged Johnston, Allison &amp; Hord P.A. ("JAH") to provide legal advice regarding the nature, scope and status of the Company's land tenure and mineral tenement rights for the Project in considering the results of the Scoping Study.</p> <p>The 2206 acres which contain the Project's Mineral Resources are currently held within (138) individual parcels, of which seven (7) are owned by Gaston Land Company, LLC, a subsidiary of the Company, and (131) parcels are owned by (82) individual landowners. Piedmont has executed option or deferred purchase agreements with each landowner granting the exclusive right to explore and evaluate the mineral products located on the land and to purchase or lease the land in Piedmont's sole discretion. For each option agreement:</p> <ul style="list-style-type: none"> <li>• The Company has made all required payments under each option agreement</li> </ul>

- Each private landowner has recorded a Memorandum of Option or Memorandum of Contract and each Memorandum is recorded in the Gaston County Register of Deeds. These Memoranda were recorded between September 2016 and May 2019.
- Title searches on all properties were completed as of the date of recording of each Memorandum of Option.
- All title searches have confirmed that landowners hold fee simple ownership of all land and mineral rights related to the land with certain real estate taxes, and utility accesses or easements which do not materially impact Piedmont's option rights or ability to extract minerals from the land.

11 properties totaling 82.8 acres which do not contain the Mineral Resource, but which are shown on the indicative site plan and which may be required to construct infrastructure, waste piles, or serve as Project buffer area are not currently owned or optioned by the Company.

The Company is not aware of any reason why this additional land cannot be acquired through lease or option by the Company or the prospective site plan modified to exclude these properties.

A Conditional District (CD) for the Project's Mine/Concentrator approved by Gaston County will be required. The Company has held initial meetings with the Gaston County planning office and the Economic Development Commission of Gaston County. The Company is not aware of any reason why rezoning and a CD would not be granted.

The Company controls 60.6 acres of property in Cleveland County for the proposed Chemical Plant.

## Material Assumptions

Project Start Date	2020
Cost and Pricing Basis	2019 Dollars
Currency	US Dollars
Cost Escalation	0%
Revenue Escalation	0%
Scoping Study Accuracy	±25% (Concentrator) ±35% (Chemical Plant)
Capex Contingency (Mine/Concentrator)	±20%
Capex Contingency (Chemical Plant)	±30%
<b>Mining</b>	
Mineral Resource	27.9Mt
Portion of Production Target – Indicated	53%
Portion of Production Target - Inferred	47%
Annual Production (steady state)	1.15Mt/y
Grade (Undiluted) LOM	1.11% Li <sub>2</sub> O
Grade (Diluted) LOM	1.05% Li <sub>2</sub> O
Life of mine	25 Years
Dilution	5%
Mining Recovery	95%
Mining Cost Base (\$/t)	US\$2.36/t
Total Ore Mined (Diluted)	25,567,000 tonnes
Total Waste Rock	266,000,000 tonnes
LOM average strip ratio	10.4:1 waste:ore
<b>Concentration</b>	
Spodumene Production per Year	160,000 tonnes
Quartz Production per Year	86,000 tonnes
Feldspar Production per Year	125,000 tonnes
Mica Production per Year	13,000 tonnes
Average Quality	6.0% Li <sub>2</sub> O
Process Recovery	85%
Total Concentrate Production	3,805,000 tonnes
Concentrate Sold to 3 <sup>rd</sup> Party	697,000 tonnes
<b>Chemical Conversion</b>	
Conversion Rate	93%
Annual Production Lithium Hydroxide	22,700 tonnes
Conversion Rate (concentrate:LiOH t:t)	6.39:1
Total LiOH Produced	489,000 tonnes
<b>Pricing</b>	
Spodumene Concentrate Avg. Price	US\$566/t (FOB Basis)
Lithium Hydroxide Avg. Price	US\$16,345/t
Quartz Concentrate Avg. Price	US\$100/t
Feldspar Concentrate Avg. Price	US\$75/t
Mica Concentrate Avg. Price	US\$50/t
<b>Other</b>	
Direct development capital – Mine/Concentrator	US\$106.2 million
Direct development capital – Chemical Plant	US\$252.6 million
Owner's costs – Chemical Plant + Mine/Concentrator	US\$23.4 million
Land acquisition costs	US\$28.3 million
Sustaining and deferred capital	US\$234.4 million
Contingency	US\$101.5 million
Royalties	\$1.00/t average per ROM ton ore
Corporate tax rate	21% Federal – 2.5% State (22.975% Aggregate)
Discount rate	8%