

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2022

OR
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission File Number 001-38427



Piedmont Lithium Inc.

(Exact name of Registrant as specified in its Charter)

Delaware **36-4996461**
(State or other jurisdiction of incorporation or organization) *(I.R.S. Employer Identification No.)*
42 E Catawba Street
Belmont, North Carolina **28012**
(Address of principal executive offices) *(Zip Code)*
Registrant's telephone number, including area code: **(704) 461-8000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common stock, \$0.0001 par value per share	PLL	The Nasdaq Capital Market

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Securities Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>	Emerging growth company	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Securities Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Securities Exchange Act).

As of June 30, 2022, the aggregate market value of voting and non-voting common stock held by non-affiliates of the registrant (based on the closing price of the registrant's common shares on the Nasdaq Stock Market for June 29, 2022) was approximately \$ 646,432,242 . For the purposes of the foregoing calculation only, all directors and executive officers of the registrant have been deemed affiliates.

As of February 24, 2023, there were 19,182,063 shares of the Registrant's common stock outstanding.

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Item 1. BUSINESS

Overview

Piedmont Lithium Inc. ("Piedmont Lithium," "we," "us," "our," "Company") is a development stage company advancing a multi-asset, integrated lithium business in support of a clean energy economy and United States ("U.S." or "America") and global energy security. We plan to supply lithium hydroxide to the electric vehicle and battery manufacturing supply chains in North America by processing spodumene concentrate produced from assets we own or in which we have an economic interest. Our portfolio of projects includes our proposed Tennessee Lithium Project and our proposed, fully-integrated Carolina Lithium Project, which are currently under development in the southeastern U.S., and our strategic investments in lithium assets in Quebec, Canada and Ghana, West Africa.

We currently expect spodumene concentrate production to come online in Quebec in the first half of 2023 and first commercial shipments are anticipated in the third quarter of 2023. Subject to obtaining permits, approvals, and financing, we plan to obtain spodumene concentrate through our offtake agreement in Ghana beginning in late 2024 or 2025, produce lithium hydroxide in Tennessee beginning in 2025 or 2026, and to produce spodumene concentrate and lithium hydroxide in North Carolina beginning in 2026 or 2027.

Piedmont Lithium is incorporated in the State of Delaware. We maintain executive offices at 42 E. Catawba Street, Belmont, NC, 28012, and our telephone number is (704) 461-8000. Our website address is www.piedmontlithium.com. Shares of our common stock, par value \$0.0001 per share, are traded on the Nasdaq Capital Market ("Nasdaq") under the symbol "PLL" and our chess depository interests ("CDIs"), each representing 1/100th of a share of our common stock, are traded on the Australian Securities Exchange ("ASX"), also under the symbol "PLL."

Change in Fiscal Year End

Effective January 1, 2022, we changed our fiscal year end from June 30 to December 31. The six-month period from July 1, 2021 to December 31, 2021, served as a transition period. Our fiscal year for 2022 commenced on January 1, 2022, and ended on December 31, 2022. See our Transition Report on Form 10-KT ("Transition Report") filed with the Securities and Exchange Commission (the "SEC") on February 28, 2022. References to years ended prior to December 31, 2021, are for a twelve-month period ended June 30.

Foreign Currencies

Our consolidated financial statements have been presented in our reporting currency, U.S. dollars. Prior to June 30, 2020, our functional currency was the Australian dollar. The change in functional currency was triggered by our increased exposure to the U.S. dollar and our expectation that future operating and capital costs will be predominantly in U.S. dollars. The change in functional currency was applied prospectively from June 30, 2020, in accordance with generally accepted accounting principles in the United States ("U.S. GAAP").

Gains and losses arising from translations or settlements of foreign currency denominated transactions or balances are included in the determination of income. Foreign currency translation adjustments resulting from the change in functional currency are included in "Other comprehensive income (loss), net of tax," and gains and losses resulting from foreign currency transactions are presented in "Foreign currency translation adjustments" in the consolidated financial statements.

Unless otherwise indicated, all references to "\$" are to U.S. dollars, all references to "AUD" are to Australian dollars, and all references to "CAD" are to Canadian dollars.

Redomiciliation

The Company acquired all of the issued and outstanding ordinary shares of Piedmont Lithium Pty Ltd (formerly named Piedmont Lithium Limited) ("Piedmont Australia"), our Australian predecessor and now a wholly-owned subsidiary, pursuant to a Scheme of Arrangement under Australian law, which was approved by Piedmont Australia's shareholders on February 26, 2021, and the Federal Court of Australia on May 5, 2021 (collectively referred to as "Redomiciliation"). As part of the Redomiciliation, we changed our place of domicile from Australia to the State of Delaware in the U.S., effective May 17, 2021.

Prior to the Redomiciliation, Piedmont Australia's ordinary shares were listed on the ASX, and Piedmont Australia's American Depositary Shares ("ADSs"), each representing 100 of Piedmont Australia's ordinary shares, were traded on Nasdaq. Following the

approval of the Redomiciliation, we moved our primary listing from the ASX to Nasdaq and retained an ASX listing via CDIs, each representing 1/100th of a share of common stock of Piedmont Lithium Inc.

Pursuant to the Redomiciliation, holders of Piedmont Australia's ordinary shares received one (1) CDI in Piedmont Lithium Inc. for each ordinary share held in Piedmont Australia on the Redomiciliation record date; and holders of ADSs in Piedmont Australia, each of which represented 100 Piedmont Australia ordinary shares, received one (1) share of common stock of Piedmont Lithium Inc. for each ADS held in Piedmont Australia on the Redomiciliation record date.

All issued and outstanding shares of our common stock have been retroactively adjusted in these consolidated financial statements to reflect the 100:1 ratio and share consolidation as if these events had occurred on July 1, 2018.

Our Segment

We have one operating segment, which is also our reportable segment. Our chief operating decision maker, who is also our Chief Executive Officer ("CEO"), manages our operations on a consolidated basis for purposes of allocating resources.

Strategy

Our strategic goal is to become a leading producer of lithium hydroxide in North America, supplied by geographically diverse and sustainable spodumene assets. North American demand for large vehicles and the custom of driving relatively long distances, combined with automakers' plans for and commitments to electric vehicle production, should continue to expand the demand for North American manufactured lithium hydroxide. We believe our global portfolio of hard rock lithium assets should support a level of estimated lithium hydroxide production that will dramatically increase current production of lithium hydroxide in North America.

Our plan is to produce battery-grade lithium hydroxide from spodumene concentrate. We believe spodumene concentrate represents the lowest-risk and most commercially scalable raw material source for the production of lithium hydroxide. Within our production process, we expect to use the innovative Metso:Outotec alkaline pressure leach process ("Metso:Outotec Pressure Leach Technology") as well as a number of manufacturing processes commonly used in the lithium industry today. We plan, as part of our sustainability goals within our overall environmental, social and governance ("ESG") strategy, to develop our greenfield operations in Tennessee and North Carolina as two of the most sustainable lithium hydroxide production operations in the world.

Our portfolio of projects and strategic equity investments are being developed on a measured timeline to provide the potential for both near-term cash flow and long-term value maximization. At production, we expect to have an estimated lithium hydroxide manufacturing capacity of 60,000 metric tons per year, as compared to the current total estimated U.S. lithium hydroxide production capacity of 15,000 metric tons per year. In support of our strategy, we continue to evaluate opportunities to further expand our resource base and production capacity.

Developing an Integrated Lithium Production Business—Key Projects

Quebec

Piedmont Lithium owns an equity interest of 25% in Sayona Quebec Inc. ("Sayona Quebec"), which owns full interests in North American Lithium ("NAL"), the Authier Lithium Project, and the Tansim Lithium Project. These projects are located in the Abitibi region of Quebec, Canada. Additionally, we own an equity interest of approximately 14% in Sayona Mining Limited ("Sayona Mining"), which in turn owns 75% of Sayona Quebec. We also hold an offtake agreement with Sayona Quebec for the greater of 113,000 metric tons per year or 50% of spodumene concentrate production at market prices, subject to a price floor of \$500 per metric ton and a price ceiling of \$900 per metric ton, on a life-of-mine basis.

The restart of NAL is proceeding as the necessary permits have been transferred or acquired, all operational leadership has been hired, a four-year mining contract has been awarded for the operation of NAL's open pit mine, and initial commissioning activities have commenced. While potential delays in restart activities could defer the start date of production, we expect NAL to begin spodumene concentrate production in the first half of 2023.

Depending upon the successful commencement of production and ability to produce nominal 6% spodumene concentrate, shipments of spodumene concentrate from NAL could commence in 2023. We have entered into offtake agreements with two customers to provide them with spodumene concentrate from NAL. Both of these offtake agreements contain market-based pricing mechanisms.

In addition to spodumene mining and concentrate production, NAL's complex also includes a partially completed lithium carbonate

facility, which was developed by a prior operator of NAL. In the event Piedmont Lithium and Sayona Mining decide to jointly construct and operate a lithium conversion plant through their jointly-owned entity, Sayona Quebec, then spodumene concentrate produced from NAL would be preferentially delivered to that conversion plant upon commencement of conversion operations. Any remaining spodumene concentrate not delivered to a jointly-owned conversion plant would first be delivered to Piedmont Lithium up to our offtake right and then to third parties.

Sayona Quebec previously announced the commencement of a prefeasibility study for the completion NAL's lithium carbonate facility. Study results are expected in the first half of 2023. Further evaluation of the production of lithium carbonate or lithium hydroxide in Quebec may follow completion of the prefeasibility study. For Sayona Quebec to proceed with the construction and operation of a lithium carbonate conversion plant or lithium hydroxide conversion plant, approvals are required from both Piedmont Lithium and Sayona Mining.

Ghana

We own an equity interest of approximately 9% in Atlantic Lithium Limited ("Atlantic Lithium") and have the ability to earn a 50% equity interest in Atlantic Lithium's spodumene projects in Ghana, West Africa. This interest includes an offtake agreement for 50% of annual production of spodumene concentrate from the Ewoyaa Lithium project ("Ewoyaa"), at market prices on a life-of-mine basis. Ewoyaa is Atlantic Lithium's flagship project in the Cape Coast region of Ghana and located approximately 70 miles from a major port via a national highway. We anticipate the development of the Ewoyaa project to be key for delivering spodumene concentrate to our planned Tennessee Lithium plant for conversion to lithium hydroxide.

In September 2022, Atlantic Lithium announced the successful completion of a prefeasibility study for Ewoyaa, demonstrating the potential of Ewoyaa to produce low-cost spodumene concentrate using a dense medium only processing technique.

In October 2022, Atlantic Lithium announced it had submitted the mining lease application for Ewoyaa to the Minerals Commission of Ghana. Subject to the receipt of the mining lease, approval of environmental studies, and other statutory requirements, construction may begin at Ewoyaa between the end of 2023 and the first half of 2024 with first spodumene concentrate production between the end of 2024 and the first half of 2025.

Tennessee Lithium

Our proposed Tennessee Lithium project ("Tennessee Lithium") is expected to be a world-class lithium hydroxide production facility located within McMinn County near Etowah, Tennessee. With first production targeted by the end of 2025 or the first half of 2026, the facility is expected to produce 30,000 metric tons per year of lithium hydroxide, doubling the current estimated U.S. production capacity of 15,000 metric tons per year. The plant is expected to be one of the most sustainable lithium hydroxide operations in the world utilizing the innovative Metso:Outotec Pressure Leach Technology. Use of this technology is expected to reduce solid waste, create fewer emissions, lower carbon intensity, and improve capital and operating costs relative to incumbent technologies.

In October 2022, Piedmont Lithium was selected for a \$141.7 million grant from the U.S. Department of Energy ("DOE") to construct Tennessee Lithium. The grant is expected to support project development on a cost-sharing basis. Tennessee Lithium was included among the initial projects funded by the Bipartisan Infrastructure Law to expand domestic manufacturing of batteries for electric vehicles and the electrical grid and for materials and components currently imported from other countries. The grant will not be final until Piedmont Lithium and the DOE have agreed to specific terms and conditions of the grant. Once terms and conditions are finalized, funding of the grant will remain subject to satisfaction of conditions set forth in those terms.

In August 2022, we awarded a front-end engineering design ("FEED") contract to Kiewit Engineering Group Inc. ("Kiewit"), a leading U.S. based engineer, procure, and construct ("EPC") firm. Kiewit is working with Primero USA Inc. ("Primero"), an EPC firm specializing in lithium projects. We expect FEED, which commenced shortly after the contract award, to be completed in the first half of 2023. Permit applications for Tennessee Lithium are progressing, and subject to receipt of all material required permits, completion of FEED, and project financing, we expect to sign an EPC contract for the construction of Tennessee Lithium. Contingent upon the timely receipt and completion of items discussed above, we expect to begin construction in 2023 or the first half of 2024 with first production of lithium hydroxide targeted by the end of 2025 or the first half of 2026.

Carolina Lithium

Our proposed, fully-integrated Carolina Lithium project ("Carolina Lithium") is a development stage, hard rock lithium project located within the Carolina Tin-Spodumene Belt of North Carolina and in close proximity to lithium markets. Carolina Lithium is expected to consist of a mining operation, concentrator, and lithium hydroxide conversion plant. In December 2021, we completed a feasibility

study, which estimated a project capital investment requirement of approximately \$1 billion, inclusive of potential recovery of byproduct mineral resources. The project is expected to produce 30,000 metric tons of lithium hydroxide per year at full capacity. Due to the expected quality of this hard rock lithium asset, integration of the operation, existing infrastructure, and proximity to lithium and byproduct markets, we believe Carolina Lithium will be one of the lowest cost lithium hydroxide manufacturing operations in the world.

We are currently engaged in permitting activities with state and local agencies for Carolina Lithium. In August 2021, we submitted a mining permit application to the North Carolina Department of Environmental Quality's ("NCDEQ") Division of Energy, Minerals, and Land Resources ("DEMLR"). We are currently in the process of responding to additional information requests made by DEMLR in connection with our mining permit application, and we have until May 2023 to respond. A Prevention of Significant Deterioration – Title V Air Permit application has been submitted to the NCDEQ Division of Air Quality and was deemed complete in February 2023.

Our goal in 2023 is to obtain the necessary material state permits for the project. After we receive the requisite permits, we will apply for a rezoning of our project followed by a special use permit from Gaston County, NC. Once we have received the rezoning and special use permit approvals, we expect to commence construction and begin production of lithium hydroxide by the end of 2026 or the first half of 2027.

Strengths

We believe that we are well-positioned to successfully execute our business strategies primarily due to our following competitive strengths:

- *U.S.-based company*—With our Redomiciliation to the U.S. in 2021, Piedmont Lithium can benefit from America's policies aimed at supporting growth in the domestic battery supply chain and reducing reliance on foreign nations. These policies include the Inflation Reduction Act's ("IRA") Advanced Manufacturing Production Credit (Section 45X), which is available only to U.S. taxpayers and is expected to provide a credit equal to 10% of annual production costs. The IRA's Clean Vehicle Tax Credit (Section 30D) for qualifying light electric vehicle purchases requires escalating usage of domestic critical minerals, which we expect to supply. These credits are in addition to the grant and loan opportunities available through the DOE, including our \$141.7 million grant selection for Tennessee Lithium and the Advanced Technology Vehicle Manufacturing loan program to which we have applied.
- *Potential for near-term production from past-producing assets*—Through our equity investment in Sayona Quebec, we established an offtake agreement and successfully acquired an interest in the past-producing NAL operation. Sayona Quebec is actively working toward first production at NAL. We believe NAL will restart spodumene concentrate production in the first half of 2023, begin commercial shipments in the second half of 2023, and achieve full production by the end of 2023 or the first half of 2024.
- *Scale and diversification of resources*—Today, we own or hold equity investments in three significant spodumene resources located in Quebec, Ghana, and North Carolina. Our Carolina Lithium project is located within the Carolina Tin-Spodumene Belt. Since January 2021, we have made investments in key spodumene resources and have established strategic partnerships with Sayona Mining and Atlantic Lithium. We continue to pursue opportunities to complement our business through additional acquisitions, joint ventures, strategic alliances, and investments.
- *Advantageous locations and infrastructure*—NAL is located in the Abitibi region of Quebec, a well-established mining district. The region provides access to infrastructure and is geopolitically advantageous. NAL is near the major mining town of Val-d'Or, Quebec, with access to rail, hydropower, and a skilled labor workforce. NAL also has an existing spodumene mine, concentrator and other substantial on-site infrastructure already in place. The Ewoyaa project is located in the Cape Coast region of Ghana with available power infrastructure nearby and direct highway access to Accra (approximately 60 miles). Ewoyaa also is approximately 70 miles from the deep-water Port of Takoradi, providing reasonable transport of spodumene concentrate as the feedstock for our planned Tennessee Lithium operation. Tennessee Lithium is located within the North Etowah Industrial Park in McMinn County, Tennessee. The region is home to a manufacturing workforce as well as power infrastructure, rail, highways, and nearby riverways. Carolina Lithium is well situated in a historical lithium region within the developing Battery Belt. The area features access to road and rail infrastructure, a highly skilled labor force, low-cost and low-carbon sources of baseload grid power, and research and development centers for lithium manufacturing.
- *Strategic funding*—We are evaluating a variety of funding options to support development objectives aimed at maintaining shareholder value in the capital markets. In February 2023, we received \$75 million from LG Chem, Ltd ("LG Chem") in exchange for common shares in Piedmont Lithium in conjunction with a multi-year spodumene concentrate offtake agreement. We were selected for a \$141.7 million DOE grant for Tennessee Lithium, and we have submitted Advanced Technology Vehicle Manufacturing loan applications for both Tennessee Lithium and Carolina Lithium. The grant will not

be final until Piedmont Lithium and the DOE have agreed to the specific terms of the grant. Once the terms have been finalized, funding of the grant will remain subject to satisfaction of conditions set forth in those terms. Strategic partnerships, offtake prepayments, mineral royalties, and other opportunities are also being considered to support the development of our projects and equity investments.

- *Greenfield opportunities*—Tennessee Lithium and Carolina Lithium are being designed as new operations, which offers the opportunity to leverage modern technologies, systems, and procedures. We expect to utilize the innovative Metso:Outotec Pressure Leach Technology to convert spodumene concentrate to lithium hydroxide at both U.S. projects. This technology is expected to provide a relative advantage in capital and operating costs and supports our ESG strategy to create a more sustainable operating profile as compared to other hard rock lithium conversion methods.
- *Highly experienced management team*—Our leadership team includes professionals with core skills and experience in the management, operations, sales, and marketing of lithium manufacturing. The team has broad backgrounds and a long history of acquiring, developing, financing, and operating mining, energy, lithium, and chemical projects.

Marketing, Sales, and Principal Markets

On July 31, 2020, we entered into a strategic partnership with Ion Carbon & Mineral, LLC to form Pronto Minerals, LLC, for the purpose of marketing and selling byproducts, specifically quartz, feldspar, and mica, produced by our proposed Carolina Lithium project. We continue to explore potential strategic partnership and sales, offtake, and marketing agreements that will benefit the development of the Company's assets as well as the U.S. electric vehicle supply chain.

Customers

While we are not yet in production, we have begun to sign offtake agreements with customers.

On January 2, 2023, we entered into an amended offtake agreement with Tesla, Inc. ("Tesla") to provide spodumene concentrate from NAL in Quebec. The agreement commits us to sell 125,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement is three years, beginning on January 2, 2023, with the start-of-production in the second half of 2023 through the end of 2025, and pricing is determined by a market-based mechanism. The three-year term can be extended for an additional three years upon mutual agreement.

On February 16, 2023 we entered into a spodumene concentrate offtake agreement with LG Chem. The agreement commits us to sell 200,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement expires four years from the date of first shipment, which is anticipated to occur by the third quarter of 2023, with the final shipment expected in the third quarter of 2027. Pricing is determined by a market-based mechanism.

Competition and Market Barriers

We compete with other mineral and chemical processing companies in connection with the acquisition of suitable exploration properties and the engagement of qualified personnel. Many of our competitors possess greater financial resources and technical facilities than we do. Although we aspire to be a leading lithium hydroxide producer in North America, the lithium mining and chemical industries are fragmented. We are one of many participants in these sectors. Many of our competitors, as compared to us, have been in business longer, have established more strategic partnerships and relationships, and have greater financial accessibility.

While we compete with other exploration companies in acquiring suitable properties, we believe there will be readily available purchasers of lithium chemical products or other industrial minerals if they are produced from any of our owned or leased properties. The price of our planned products may be affected by factors beyond our control, including fluctuations in the market prices for lithium, supplies of lithium, demand for lithium, and mining activities of others.

If we identify lithium mineralization that is determined to be of economic grade and in sufficient quantity to justify production, additional capital would be required to develop, mine, and sell that production. Our strategic partnerships, in which we have equity investments, face similar challenges as discussed above.

Government Regulations

Overview

Exploration and development activities for our projects are subject to extensive laws and regulations, which are overseen and enforced by multiple U.S. federal, state, and local authorities as well as foreign jurisdictions. These applicable laws govern exploration, development, production, exports, various taxes, labor standards, occupational and mine health and safety, waste disposal, protection and remediation of the environment, protection of endangered and protected species, and other matters. Various permits from government bodies are required for drilling, mining, or manufacturing operations to be undertaken, and we cannot be assured such permits will be received. Environmental laws and regulations may also, among other things:

- require notice to stakeholders of proposed and ongoing exploration, drilling, environmental studies, mining, or production activities;
- require the installation of pollution control equipment;
- restrict the types, quantities and concentrations of various substances that can be released into the environment in connection with exploration, drilling, mining, lithium hydroxide manufacturing, or other production activities;
- limit or prohibit drilling, mining, lithium manufacturing or other production activities on lands located within wetlands, areas inhabited by endangered species and other protected areas, or otherwise restrict or prohibit activities that could impact the environment, including water resources;
- impose substantial liabilities for pollution resulting from current or former operations on or for any preexisting environmental impacts from our projects;
- require significant reclamation obligations in the future as a result of our mining and chemical operations; and
- require preparation of an environmental assessment or an environmental impact statement.

Compliance with environmental laws and regulations may impose substantial costs on us, subject us to significant potential liabilities, and have an adverse effect on our capital expenditures, results of operations, or competitive position. Violations and liabilities with respect to these laws and regulations could result in significant administrative, civil, or criminal penalties, remedial clean-ups, natural resource damages, permit modifications and/or revocations, operational interruptions and/or shutdowns, and other liabilities, as well as reputational harm, including damage to our relationships with customers, suppliers, investors, governments or other stakeholders. The costs of remedying such conditions may be significant, and remediation obligations could adversely affect our business, results of operations, and financial condition. Federal, state, and local legislative bodies and agencies frequently revise environmental laws and regulations, and any changes in these regulations, or the interpretations thereof, could require us to expend significant resources to comply with new laws or regulations or changes to current requirements and could have a material adverse effect on our business operations. As of the date of this Annual Report on Form 10-K, other than with respect to the permitting activities of Carolina Lithium and Tennessee Lithium, we have not been required to spend material amounts on compliance regarding environmental regulations.

Permits

Obtaining and renewing governmental permits is a complex and time-consuming process and involves numerous jurisdictions, public hearings, and possibly costly undertakings. The timeliness and success of permitting efforts are contingent upon many variables not within our control, including the interpretation of permit approval requirements administered by the applicable permitting authority. We may not be able to obtain or renew permits that are necessary for our planned operations, or the cost and time required to obtain or renew such permits may exceed our expectations. Any unexpected delays or costs associated with the permitting process could delay the exploration, development and/or operation of our projects. See "Risk Factors—*We will be required to obtain governmental permits in order to conduct development and mining operations, a process which is often costly and time-consuming, and there is no certainty that all necessary permits for our operations will be granted.*"

Tennessee Lithium

In October 2022, we submitted a Conditional Major Non-Title V air permit application to Tennessee Department of Environment and Conservation ("TDEC") Air Pollution Control for the proposed lithium hydroxide site to be located in the North Etowah Industrial Park in McMinn County, Tennessee. We received a request for additional information in November 2022. The response to this request was provided in December 2022. Our application was deemed completed in January 2023 and is subject to ongoing review.

Additional permits for our Tennessee Lithium project will be required, including, but not limited to, a U.S. Army Corp of Engineers 404 jurisdictional determination, construction stormwater permit, a municipal wastewater permit by Etowah Utilities, various

driveway permits issued by McMinn County, and waste disposal permits. The building permit process will include design reviews by the McMinn County Economic Development Authority.

Carolina Lithium

In November 2019, we were granted a Clean Water Act Section 404 Standard Individual Permit from the U.S. Army Corps of Engineers ("USACE") for our integrated Carolina Lithium project.

In July 2022, we received an updated Clean Water Act Section 401 Individual Water Quality Certificate from the NCDEQ Division of Water Resources for the Carolina Lithium project.

In August 2021, we submitted a mining permit application to NCDEQ's DEMLR, and have subsequently received two requests for additional information. We responded to the first request for additional information in December 2021, and we are currently in the process of responding to the second request for additional information, which is due in May 2023.

In September 2021, Gaston County updated its Unified Development Ordinance ("UDO") which, in part, defined operational requirements for new mines and quarries in the county. As required by the UDO updates, new mines and quarries must operate on industrially-zoned property within the county and obtain a Special Use Permit approved by the Gaston County Board of Commissioners. At this time, we remain in pre-application consultation with Gaston County and have not submitted a rezoning application or a special use application.

We hold a Synthetic Minor Construction and Operation Permit issued by the NCDEQ's Division of Air Quality ("DAQ") for our property in Kings Mountain, NC. In June 2022, we submitted an application to modify the received air permit to incorporate the use of Metso/Outotec Pressure Leach Technology. Our application is currently on hold as further refinements to the process are being made.

In January 2022, we submitted a determination request to DAQ in connection with Carolina Lithium. In March 2022, we received a response to this request informing us that Carolina Lithium would require a Title V Prevention of Significant Deterioration permit ("Title V Permit"). In August 2022, we submitted our Title V Permit application and our application was deemed complete in February 2023 and is subject to ongoing review.

In January 2022, we received guidance that Carolina Lithium was not eligible for a North Carolina General Stormwater Permit. After further evaluation and testing, it was determined that the site would be covered by a National Pollutant Discharge Elimination System ("NPDES") permit. In December 2022, we submitted applications for two permits covering the mine and concentration operations, and the lithium hydroxide conversion plant to the NCDEQ Division of Water Resources. Both permits applications are currently under review.

Exploration and evaluation activities for our Carolina Lithium project included drilling, which is authorized under a general permit initially approved in 2017 by the NCDEQ and updated in April 2019, October 2019 and June 2021. We have reclamation obligations under this permit, pursuant to which we will be obligated to reclaim all disturbed drill pads and temporary roads to the approximate original contours, and will seed with grass and straw to stabilize any disturbances. Generally, we are required to affect such reclamation within 14 days following drilling. We have concluded that these reclamation obligations are immaterial.

We may be required to obtain additional permits and approvals for Carolina Lithium including, but not limited to, a municipal wastewater permit by the City of Gastonia Wastewater Treatment, a road abandonment approved by the North Carolina Department of Transportation ("NCDOT") and Gaston County under North Carolina General Statute 136-63, an encroachment permit for an at-grade rail crossing issued by NCDOT, various driveway permits issued by NCDOT, a Gaston County Watershed Permit approved by the Gaston County Planning Department, various building permits approved by the Gaston County Planning Department, explosives permits approved by the U.S. Bureau of Alcohol, Tobacco, and Firearms, and hazardous chemical permits issued by Gaston County Fire Officials.

U.S. Federal Legal Framework

Carolina Lithium and Tennessee Lithium will be required to comply with applicable environmental protection laws and regulations and licensing and permitting requirements. The material environmental, health, and safety laws and regulations that we must comply with include, among others, the following U.S. federal laws and regulations:

- National Environmental Protection Act ("NEPA"), which requires careful evaluation of the environmental impacts of mining and lithium manufacturing operations that require federal approvals;

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- Clean Air Act ("CAA") and its amendments, which governs air emissions;
- Clean Water Act ("CWA"), which governs discharges to and excavations within the waters of the U.S.;
- Resource Conservation and Recovery Act ("RCRA"), which governs the management of solid waste;
- Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), which imposes liability where hazardous substances have been released into the environment (commonly known as Superfund); and
- Federal Mine Safety and Health Act, which established the primary safety and health standards regarding working conditions of employees engaged in mining, related operations, and preparation and milling of the minerals extracted, as well as the Occupation Safety and Health Act, which regulates the protection of the health and safety of workers in lithium manufacturing operations.

Our operations will also be subject to state environmental laws and regulations, including but not limited to, laws and regulations related to the reclamation of mined lands, which may require reclamation bonds to be acquired prior to the commencement of mining operations and may require substantial financial guarantees to cover the cost of future reclamation activities.

Solid and Hazardous Waste

RCRA, and comparable state statutes, affect our operations by imposing regulations on the generation, transportation, treatment, storage, disposal, and cleanup of hazardous wastes and on the disposal of non-hazardous wastes. Under the auspices of the U.S. Environmental Protection Agency ("EPA"), the individual states administer some or all of the provisions of RCRA, sometimes in conjunction with their own, more stringent requirements.

In addition, CERCLA can impose joint and several liability without regard to fault or legality of conduct on classes of persons who are statutorily responsible for the release of a hazardous substance into the environment. These persons can include the current and former owners, lessees, or operators of a site where a release occurs, and anyone who disposes or arranges for the disposal of a hazardous substance. Under CERCLA, such persons may be subject to strict, joint, and several liability for the entire cost of cleaning up hazardous substances that have been released into the environment and for other costs, including response costs, alternative water supplies, damage to natural resources and for the costs of certain health studies. Moreover, it is not uncommon for neighboring landowners, workers, and other third parties to file claims for personal injury and property damage allegedly caused by hazardous substances released into the indoor or outdoor environment. Each state also has environmental cleanup laws analogous to CERCLA. Hazardous wastes may have been previously handled, disposed of, or released on or under properties currently or formerly owned or leased by us or on or under other locations to which we sent waste for disposal. These properties and any materials disposed or released on them may subject us to liability under CERCLA, RCRA, and analogous state laws. Under such laws, we could be required to remove or remediate disposed wastes or property contamination, contribute to remediation costs, or perform remedial activities to prevent future environmental harm.

Air Emissions

The federal CAA and comparable state laws restrict the emission of air pollutants from numerous sources through the issuance of permits and the imposition of other requirements. Major sources of air pollutants are subject to more stringent, federally imposed permitting requirements. Air pollution regulations may require us to obtain pre-approval for the construction or modification of certain projects or facilities expected to produce or significantly increase air emissions, obtain air permits, and comply with stringent permit requirements or utilize specific equipment or technologies to control emissions of certain pollutants. The need to obtain permits has the potential to delay our operations, and we may be required to incur capital expenditures for air pollution control equipment or other air emissions related obligations. Administrative enforcement actions for failure to comply strictly with air pollution regulations or permits are generally resolved by payment of monetary fines and correction of any identified deficiencies. Alternatively, regulatory agencies could require us to forego construction, modification, or operation of certain air emission sources.

Clean Water Act

The CWA imposes restrictions and strict controls regarding the pollution of protected waters, including mineral processing wastes, into waters of the U.S., a term broadly defined to include, among other things, certain wetlands. Permits must be obtained to discharge pollutants into federal waters. The CWA provides for civil, criminal, and administrative penalties for unauthorized discharges, both routine and accidental, of pollutants. It imposes substantial potential liability for the costs of removal or remediation associated with discharges of oil or hazardous substances. State laws governing discharges to water also provide varying civil, criminal, and administrative penalties, and impose liabilities in the case of a discharge of petroleum or its derivatives, or other hazardous substances, into state waters. In addition, the EPA has promulgated regulations that require permits to discharge storm water runoff, including

discharges associated with construction activities. In the event of an unauthorized discharge of wastes, we may be liable for penalties and costs.

Pursuant to these laws and regulations, we may also be required to develop and implement spill prevention, control, and countermeasure plans in connection with on-site storage of significant quantities of oil. Some states also maintain groundwater protection programs that require permits for discharges or operations that may impact groundwater conditions. The CWA also prohibits the discharge of fill materials to regulated waters, including wetlands, without a permit from the USACE.

In May 2015, the EPA issued a final rule that attempted to clarify the federal jurisdictional reach over waters of the U.S., The agency repealed this rule in September 2019 and replaced it with the Navigable Water Protection Rule in April 2020, which narrowed federal jurisdictional reach relative to the 2015 rule. The repeal and replacement of the 2015 rule is currently subject to litigation, and the scope of the jurisdictional reach of the CWA may, therefore, remain uncertain for several years, with a patchwork of legal guidelines applicable to various states potentially developing. We could incur increased costs and delays with respect to obtaining permits for dredge and fill activities in wetland areas to the extent they are required.

NEPA

NEPA requires federal agencies to evaluate major agency actions having the potential to significantly impact the environment. The NEPA process involves public input through comments, which can alter the nature of a proposed project either by limiting the scope of the project or requiring resource-specific mitigation. NEPA decisions can be appealed through the court system by process participants. This process may result in delaying the permitting and development of projects or increase the costs of permitting and developing some facilities.

Endangered Species Act

The federal Endangered Species Act ("ESA") restricts activities that may affect endangered and threatened species or their habitats. Some of our operations may be located in areas that are designated as habitats for endangered or threatened species. A critical habitat designation could result in further material restrictions to federal and private land use and could delay or prohibit land access or development. The U.S. Fish and Wildlife Service continues its effort to make listing decisions and critical habitat designations where necessary. To date, the ESA has not had a significant impact on our operations. However, the designation of previously unprotected species as being endangered or threatened could cause us to incur additional costs or become subject to operating restrictions in areas where the species are known to exist.

Foreign Legal Framework

Our proposed projects with Sayona Mining and Atlantic Lithium will be required to comply with all environmental laws and regulations in Quebec, Canada and Ghana, West Africa, respectively.

Human Capital Management

Our core values exhibited by our employees include care for our people, humility in the way we operate, creativity in the way we innovate, respect for the communities in which we operate, and integrity in how we conduct business.

Our guiding principles define how we are to live our core values each day; deliver best-in-class safety, environment and health ("SEH") performance; operate sustainably and in compliance with applicable laws and regulations; focus on customers in all we do; empower our teams and enable lean decision making; deliver operational excellence that exceeds customer expectations; drive process technology excellence and continuous improvement; and create a culture of learning and development.

Employees

As of December 31, 2022, we had 40 employees. All our employees are located in the U.S. None of our employees are subject to any union or collective bargaining agreement. We believe that we have a good relationship with our employees.

Contractors

We rely on specialized skills and knowledge to gather, interpret and process geological and geophysical data; successfully permit, design, build, and operate production facilities; and engage in numerous additional activities required as part of the mine-to-lithium hydroxide process. We have employed, and expect to continue to employ, a strategy of contracting consultants and other service

providers who have specialized skills and knowledge to supplement the skills and knowledge of our permanent workforce to undertake our lithium operations effectively.

Safety, Environment, and Health

SEH is a cornerstone of our Company. Our commitment to the health and welfare of every person involved in our projects is built into every aspect of our organization and is engrained in our Company's culture. We endeavor to implement safety programs and develop risk management processes covering our project activities to promote a behavior-based safety culture, ensure compliance with applicable environmental regulations and international standards, and raise environmental awareness among our employees and partners. Our SEH vision is to conduct operations with safety and the environment as a top priority. We work to promote the "Piedmont Promise" which recognizes our obligation to our employees, neighbors, stakeholders, and the communities in which we live, work, and play.

Diversity, Equity, and Inclusion

Diversity, equity, and inclusion are embedded in our values and integrated into our strategies. Our Code of Business Conduct and Ethics ("Code of Conduct") commits us to fair treatment and non-discrimination. Our policy is to treat each employee and job applicant without regard to race, color, age, sex, religion, national origin, citizenship, sexual orientation, gender identity, ancestry, veteran status, or any other category protected by law. We believe in allocating resources and establishing, in an equitable manner, policies and procedures that are fair, impartial, and just. We believe we will become better and achieve growth by intentionally creating a culture through acquiring and retaining a diverse workforce. We recognize it takes unique gifts, talents, varied perspectives, backgrounds, and experiences to deliver innovative, high-quality products and services. To provide a diverse and inclusive workplace, we focus our efforts on creating a culture where all employees can contribute their skills and talents and be themselves.

Compensation and Benefits

Our compensation and benefits program is designed to attract and retain talented employees in the industry by offering competitive compensation and benefits. We use a combination of fixed and variable compensation that includes base salary, incentive bonuses with a pay for performance elements, and merit increases. As part of our long-term incentive plan for executives and certain key employees, we provide long-term equity awards tied to the value of our stock price, some of which are performance-based. Additionally, all employees are eligible for an annual discretionary cash bonus and a long-term equity grant. We are also focused on the health and wellness of our employees. As such, we offer eligible employees comprehensive medical plans, dental and vision coverage, short-term and long-term disability insurance, term life insurance, flexible work schedules, an employee assistance program, remote and hybrid work options, paid time off, new parent leave, and a 401(k) plan.

Commitment to Values and Ethics

In connection with our core values, we act in accordance with our Code of Conduct. Our Code of Conduct requires a commitment from employees, officers and directors of Piedmont Lithium to conduct business honestly and ethically. Our Code of Conduct discusses the responsibility team members have to each other, the Company, stockholders, our customers, and communities in which we operate. We have an anonymous hotline for employees to call in the event of ethical concerns or suspected instances of misconduct.

Protecting the Rights of Workers

We are an Equal Opportunity Employer committed to providing its employees with a safe, non-discriminatory work environment that promotes open and honest communication and embraces dignity, respect, and diversity in all aspects of its business operations. We expect our partners, suppliers, and contractors to uphold the same commitments. We maintain policies designed to support the elimination of all forms of forced labor including prison labor, forcibly indentured labor, bonded labor, slavery, and servitude. We condemn all forms of child exploitation. We do not recruit child labor and we support the standard covering the prohibition on child labor in accordance with the International Labor Organization Minimum Age Convention. We also support laws enacted to prevent and punish the crime of sexual exploitation of children, and we will cooperate fully with law enforcement authorities in these matters. We will work with our partners at Atlantic Lithium and Sayona Mining to ensure appropriate policies are in place within the businesses and projects we have invested in.

Anti-Human Trafficking

We are committed to a work environment that is free from human trafficking and slavery, which includes forced labor and unlawful child labor. We will not tolerate or condone human trafficking or slavery in any part of our global organization.

Human Rights and Relationships with Indigenous People

We are committed to respecting human rights and providing a positive contribution in the communities where we plan to operate. We expect our partners, suppliers, and contractors to uphold the same commitment. We respect the cultures, customs, and values of people in the communities where we plan to operate and take into account their needs, concerns, and aspirations.

Equal Opportunity and Zero Discrimination

We recognize, respect, and embrace the cultural differences found in the worldwide marketplace. Our goal is to attract, develop, promote, and retain the best people from all cultures and segments of the population, based on ability. We maintain a policy of zero tolerance for discrimination or harassment of any kind. We have implemented policies regarding the reporting and investigation of discrimination, harassment, sexual harassment, retaliation, and abusive behavior.

Community Involvement

We are committed to making a measurable impact in the communities related to our project and equity investments through our charitable giving. In December, 2021, we created Piedmont Lithium Foundation – Power for Life, Inc., to provide scholarships to science, technology, engineering and mathematics students and financial support to our schools and communities.

We have devoted tremendous time and effort to engaging community stakeholders regarding Carolina Lithium. We have begun similar engagement with stakeholders surrounding Tennessee Lithium and look forward to working with our new neighbors in a similar fashion.

Through in-person meetings, phone calls, social media, and information shared with the media via press releases and interviews, we work to keep the community residents and local businesses informed of our plans and activities. Our goal is to develop relationships with residents near the sites of Carolina Lithium and Tennessee Lithium and communicate our commitment to responsibly developing two of the world's most sustainable lithium hydroxide operations. Further, we are committed to working with our investment partners, Sayona Mining and Atlantic Lithium, both of whom have several mechanisms in place for engaging with the local communities regarding their projects, including addressing concerns and sharing information about employment opportunities.

Sustainability

We are committed not only to contributing to the transition to a net zero carbon world and the creation of a clean energy economy in North America by the products we sell, but also in the way we produce products, operate our business, and work with our customers, vendors, and stakeholders. As we are currently in the design phase for Tennessee Lithium, we have incorporated equipment and technology to reduce our carbon footprint from the onset of our operations. We are also evaluating our emission profiles in a pre-operational state while establishing systems and tools to allow us to manage data easily and efficiently as we continue to grow.

Governance

Audit Committee

The primary responsibilities of our Audit Committee are to monitor the integrity of our consolidated financial statements, the independence and qualifications of our independent auditors, the performance of our accounting staff and independent auditors, our compliance with legal and regulatory requirements and the effectiveness of our internal controls. The Audit Committee is also responsible for selecting, retaining (subject to stockholder approval), evaluating, setting the compensation of and, if appropriate, recommending the termination of our independent auditors.

Leadership and Compensation Committee

The primary purpose of our Leadership and Compensation Committee is to assist our Board of Directors ("Board") in discharging its responsibilities relating to compensation of the Company's executive officers and directors, and overseeing the Company's overall compensation philosophy, policies, and programs.

Nominating and Corporate Governance Committee

The primary purpose of our Nominating and Corporate Governance Committee is to identify individuals qualified to become members of the Company's Board, make recommendations on candidates for election at the annual meeting of stockholders, and perform a leadership role in shaping the Company's corporate governance, including the implementation of our ESG principles. The Nominating and Corporate Governance Committee is also responsible for preparing the report required by the SEC for the Company's annual proxy statement.

Corporate Information

Our principal executive offices are located at 42 E Catawba Street, Belmont, NC, 28012, and our telephone number is (704) 461-8000. We file electronically with the SEC our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. We make available on our website at www.piedmontlithium.com, under "Investors," free of charge, copies of these reports as soon as reasonably practicable after filing or furnishing these reports to the SEC.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Our Annual Report on Form 10-K ("Annual Report") contains forward-looking statements that involve risks and uncertainties and includes statistical data, market data and other industry data and forecasts, which we obtained from market research, publicly available information and independent industry publications and reports that we believe to be reliable sources.

Certain information included or incorporated by reference in our Annual Report may be deemed to be "forward-looking statements" within the meaning of applicable securities laws. Such forward-looking statements concern our anticipated results and progress of our operations in future periods, planned exploration and development of our properties and plans related to our business and other matters that may occur in the future. These statements relate to analyses and other information that are based on forecasts of future results, estimates of amounts not yet determinable and assumptions of management. All statements contained herein that are not clearly historical in nature are forward-looking, and the words "anticipate," "believe," "expect," "estimate," "may," "might," "will," "could," "can," "shall," "should," "would," "leading," "objective," "intend," "contemplate," "design," "predict," "potential," "plan," "target" and similar expressions are generally intended to identify forward-looking statements. Forward-looking statements are subject to a variety of known and unknown risks, uncertainties and other factors which could cause actual events or results to differ from those expressed or implied by the forward-looking statements. Forward-looking statements in our Annual Report include, but are not limited to, statements with respect to risks related to:

- our operations being further disrupted and our financial results being adversely affected by public health threats, including the novel coronavirus ("COVID-19") pandemic;
- our limited operating history in the lithium industry;
- our status as a development stage issuer, including our ability to identify lithium mineralization and achieve commercial lithium mining;
- mining, exploration and mine construction, if warranted, on our properties, including timing and uncertainties related to acquiring and maintaining mining, exploration, environmental and other licenses, permits, zoning, rezoning, access rights or approvals in Gaston County, North Carolina (including the Carolina Lithium project, as defined above), McMinn County, Tennessee (including the Tennessee Lithium project, as defined above), the Province of Quebec, Canada and Ghana, West Africa as well as properties that we may acquire or obtain an equity interest in the future;
- our ability to achieve and maintain profitability and to develop positive cash flows from our mining and processing activities;
- our estimates of mineral resources and whether mineral resources will ever be developed into mineral reserves;
- investment risk and operational costs associated with our exploration and development activities;
- our ability to develop and achieve production on our properties;
- our ability to enter into and deliver products under offtake agreements;
- the pace of adoption and cost of developing electric transportation and storage technologies dependent upon lithium batteries;
- our ability to access capital and the financial markets;
- recruiting, training, developing and retaining employees, including our senior management team;

- possible defects in title of our properties;
- compliance with government regulations;
- environmental liabilities and reclamation costs;
- estimates of and volatility in lithium prices or demand for lithium;
- our common stock price and trading volume volatility; and
- our failure to successfully execute our growth strategy, including any delays in our planned future growth.

All forward-looking statements reflect our beliefs and assumptions based on information available at the time the assumption was made. These forward-looking statements are not based on historical facts but rather on management's expectations regarding future activities, results of operations, performance, future capital and other expenditures, including the amount, nature and sources of funding thereof, competitive advantages, business prospects and opportunities. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, known and unknown, that contribute to the possibility that the predictions, forecasts, projections or other forward-looking statements will not occur. Although we have attempted to identify important factors that could cause actual results to differ materially from those described in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated, or expected. We caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date made. Except as otherwise required by the securities laws of the U.S., we disclaim any obligation to subsequently revise any forward-looking statements to reflect events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events. We qualify all the forward-looking statements contained in our Annual Report by the foregoing cautionary statements.

CAUTIONARY NOTE REGARDING DISCLOSURE OF MINERAL PROPERTIES

We are subject to the periodic reporting requirements of both U.S. and Australian securities laws with respect to mining matters. In the U.S., we are governed by the Exchange Act of 1934, as amended ("Exchange Act"), including Regulation S-K, Subpart 1300 ("S-K 1300") thereunder. In Australia, we are governed by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code"). Both sets of reporting standards have similar goals in terms of conveying an appropriate level of confidence in the disclosures being reported but may at times embody different approaches or definitions.

On October 21, 2021, we announced an inaugural mineral resources estimate for our Carolina Lithium project. On December 14, 2021, we announced the completion of a bankable feasibility study ("BFS") for our Carolina Lithium project, which included an initial estimation of mineral reserves. These estimates of mineral resources and mineral reserves are compatible with both S-K 1300 and JORC Code. A Technical Report Summary with respect to our estimated mineral reserves was filed as exhibit to our Transition Report for the period ending December 31, 2021. This Technical Report Summary was amended to include certain information as required by Item 1300 of Regulation S-K. The Amended Technical Report Summary dated February 27, 2023 is included as Exhibit 96.1 and filed with our Annual Report.

PART I

Item 1A. RISK FACTORS.

You should carefully consider the risks described below, together with all the other information in our Annual Report. If any of the following risks occur, our business, financial condition and results of operations could be seriously harmed, and you could lose all or part of your investment. Further, if we fail to meet the expectations of the public market in any given period, the market price of our common stock could decline. We operate in a competitive environment that involves significant risks and uncertainties, some of which are outside of our control. If any of these risks actually occurs, our business and financial condition could suffer and the price of our stock could decline. We caution you that the risks, uncertainties and other factors referred to below and elsewhere in our Annual Report may not contain all the risks, uncertainties, and other factors that may affect our future results and operations. Our future results and operations could also be affected by factors, events, or uncertainties that are not presently known to us or that we currently do not consider to present a material risk. It is not possible for our management to predict all risks.

Business Risks

Our future performance is difficult to evaluate because we have a limited operating history in the lithium industry.

We began to implement our current business strategy in the lithium industry in 2016. We have not realized any revenues to date from the sale of lithium, and our operating cash flow needs have been financed primarily through issuances of common stock and not through cash flows derived from our operations. As a result, we have little historical financial and operating information available to help you evaluate our performance.

We are a development stage company, and there is no guarantee that our development will result in the commercial extraction of mineral deposits.

We are engaged in the business of exploring and developing mineral properties with the intention of locating economic deposits of minerals. We have declared mineral reserves but have not yet begun to extract mineral from our property interests. Accordingly, we cannot assure you that we will realize profits in the medium to long term. Any profitability in the future from our business will be dependent upon the development of an economic deposit of minerals and further exploration and development of other economic deposits of minerals, each of which is subject to numerous risk factors. Further, we cannot assure you that any of our property interests can be commercially mined or that our ongoing exploration programs will result in profitable commercial mining operations. The exploration and development of mineral deposits involves a high degree of financial risk over a significant period of time, which may or may not be reduced or eliminated through a combination of careful evaluation, experience, and skilled management. While discovery of additional ore-bearing deposits may result in substantial rewards, few properties that are explored are ultimately developed into producing mines. Major expenses may be required to construct mining and processing facilities and to establish additional reserves. The profitability of our operations will be, in part, directly related to the cost and success of our exploration and development programs, which may be affected by a number of factors. Additional expenditures are required to construct, complete, and install mining and processing facilities in those properties that are actually mined and developed.

In addition, exploration and development projects like ours have no operating history upon which to base estimates of future operating costs and capital requirements. Exploration project items, such as any future estimates of reserves, metal recoveries or cash operating costs will, to a large extent, be based upon the interpretation of geologic data, obtained from a limited number of drill holes and other sampling techniques, as well as future feasibility studies. Actual operating costs and economic returns of any and all exploration projects may materially differ from the costs and returns estimated, and accordingly, our financial condition, results of operations, and cash flows may be negatively affected.

Some of our current or future properties may not contain any reserves, and any funds spent on exploration and evaluation may be lost.

We are a development stage mining company. We cannot assure you that our exploration programs will identify economically extractable mineralization, nor can we assure you about the quantity or grade of any mineralization we seek to extract. Our exploration prospects may not contain any reserves and any funds spent on evaluation and exploration may be lost. Even for the mineral reserves we have reported for our properties, any quantity or grade of reserves we indicate must be considered as estimates only until such reserves are actually mined. We do not know with certainty that economically recoverable lithium exists on our properties. In addition, the quantity of any reserves may vary depending on commodity prices. Any material change in the quantity or grade of reserves may affect the economic viability of our properties.

We face risks related to mining, exploration, mine construction, and plant construction, if warranted, on our properties.

Our level of profitability, if any, in future years will depend to a great degree on lithium prices and whether our exploration-stage properties can be brought into production. Exploration and development of lithium resources are highly speculative in nature, and it is impossible to ensure that the current and future exploration programs and/or feasibility studies on our existing properties will establish reserves. Whether it will be economically feasible to extract lithium depends on a number of factors, including, but not limited to: the particular attributes of the deposit, such as size, grade, and proximity to infrastructure; lithium prices; mining, processing and transportation costs; the willingness of lenders and investors to provide project financing; labor costs and possible labor strikes; and governmental regulations, including, without limitation, regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting materials, foreign exchange, environmental protection, employment, worker safety, transportation, and reclamation and closure obligations. We could be adversely affected by a failure to complete our plant construction projects on time or on budget, and a substantial delay in the progress of construction due to adverse weather, work stoppages, shortages of materials, non-issuances of permits, nonperformance of suppliers or contractors, or other factors could result in a material increase in the overall cost of such projects. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in us receiving an inadequate return on invested capital. In addition, we are subject to the risks normally encountered in the mining industry, such as:

- the discovery of unusual or unexpected geological formations;
- accidental fires, floods, earthquakes, severe weather, or other natural disasters;
- unplanned power outages and water shortages;
- construction delays and higher than expected capital costs due to, among other things, supply chain disruptions, higher transportation costs, and inflation;
- controlling water and other similar mining hazards;
- explosions and mechanical failure of equipment;
- operating labor disruptions and labor disputes;
- shortages in materials or equipment and energy and electrical power supply interruptions or rationing;
- seismic activity;
- the ability to obtain suitable or adequate machinery, equipment, or labor;
- our liability for pollution or other hazards; and
- other unknown risks involved in the conduct of exploration and operation of mines.

The nature of these risks is such that liabilities could exceed any applicable insurance policy limits or could be excluded from coverage. There are also risks against which we cannot insure or against which we may elect not to insure. The potential costs, which could be associated with any liabilities not covered by insurance or in excess of insurance coverage, or compliance with applicable laws and regulations may cause substantial delays and require significant capital outlays, adversely affecting our future earnings, competitive position, and potentially our financial viability.

Our long-term success will depend ultimately on our ability to generate revenues, achieve and maintain profitability, and develop positive cash flows from our mining activities.

Our ability to (i) recover carrying values of our assets, (ii) acquire additional lithium projects, (iii) continue with exploration, development, commissioning, mining, and (iv) manufacture lithium hydroxide, ultimately depends on our ability to generate revenues, achieve and maintain profitability, and generate positive cash flow from our operations. The economic viability of our future mining activities has many risks and uncertainties including, but not limited to:

- a significant, prolonged decrease in the market price of lithium or lithium hydroxide;
- difficulty in marketing and/or selling lithium or lithium hydroxide;
- significantly higher than expected capital costs to construct our mine;
- significantly higher than expected extraction costs;
- significantly lower than expected lithium extraction;
- significant delays, reductions, or stoppages of lithium extraction activities;

- shortages of adequate and skilled labor or a significant increase in labor costs;
- the introduction of significantly more stringent regulatory laws and regulations; and
- delays in the availability of construction equipment.

We are concurrently overseeing the advancement of several major lithium projects, including Carolina Lithium, which is in the development planning stage, and Tennessee Lithium, which is currently in the FEED stage and we are managing through a partnership with Kiewit. Work to advance these projects requires the dedication of considerable time and resources by us and our management team. The advancement of several major resource projects concurrently brings with it the associated risk of strains on managerial, human and other resources. Our ability to successfully manage each of these processes will depend on a number of factors, including our ability to manage competing demands on time and other resources, financial or otherwise, and successfully retain personnel and recruit new personnel to support our growth and the advancement of our projects.

In addition, our plan is to produce battery-grade lithium hydroxide from spodumene concentrate at Tennessee Lithium using the innovative Metso:Outotec Pressure Leach Technology as well as a number of processes commonly used in the lithium industry today. We may encounter difficulties or unforeseen expenditures in integrating new, unproven technologies.

It is common for a new mining operation to experience unexpected costs, problems and delays during construction, commissioning and mine start-up. Most mining projects suffer delays during these periods due to numerous factors, including the factors listed above. Any of these factors could result in changes to economic returns or cash flow estimates of the project or have other negative impacts on our financial position. There is no assurance that our projects will commence commercial production on schedule, or at all, or will result in profitable mining operations. If we are unable to develop our projects into a commercial operating mine, our business and financial condition will be materially adversely affected. Moreover, even if the feasibility study continues to support a commercially viable project, there are many additional factors that could impact the project's development, including terms and availability of financing, cost overruns, litigation or administrative appeals concerning the project, delays in development, and any permitting changes, among other factors.

Our future mining and lithium manufacturing activities may change as a result of any one or more of these risks and uncertainties. We cannot assure you that any ore body from which we extract mineralized materials will result in achieving and maintaining profitability and developing positive cash flows.

Our long-term success depends on our ability to enter into and deliver product under offtake agreements.

We may encounter difficulty entering and fulfilling offtake agreements for our products. We may fail to deliver the product required by such agreements or may experience production costs in excess of the price to be paid to us under such agreements. As of the date of this filing, we have entered into two offtake agreements for our lithium products.

On January 2, 2023, we entered into an amended offtake agreement with Tesla to provide spodumene concentrate from NAL in Quebec. The agreement commits us to sell 125,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement is three years, from the second half of 2023 until the end of 2025, and pricing is determined by a market-based mechanism. The three-year term can be extended for an additional three years upon mutual agreement.

On February 16, 2023 we entered into a spodumene concentrate offtake agreement with LG Chem. That agreement commits us to sell 200,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement is four years, beginning in the third quarter of 2023 until the third quarter of 2027 or until we have delivered 200,000 metric tons of spodumene concentrate. Pricing is determined by a market-based mechanism.

Our business, results of operations, and financial condition may be materially and adversely affected if we are unable to enter into similar agreements with other buyers, deliver the products required by such agreements, or incur costs in excess of the price set forth in such agreements.

We depend on our ability to successfully access the capital and financial markets. Any inability to access the capital or financial markets may limit our ability to meet our liquidity needs and long-term commitments, fund our ongoing operations, execute our business plan or pursue investments that we may rely on for future growth.

Until commercial production is achieved from our planned projects, we will continue to incur operating and investing net cash outflows associated with including, but not limited to, maintaining and acquiring exploration properties, undertaking ongoing exploration activities, the development of our planned Tennessee Lithium and Carolina Lithium projects, and our funding obligations

to develop the assets of our joint ventures with Sayona Mining, including the NAL project, and Atlantic Lithium's Ewoyaa project. As a result, we rely on access to capital markets as a source of funding for our capital and operating requirements. We require additional capital to meet our liquidity needs related to expenses for our various corporate activities, including the costs related to our status as a publicly traded company, fund our ongoing operations, explore and define lithium mineralization, and establish any future mining or lithium manufacturing operations. We cannot assure you that such additional funding will be available to us on satisfactory terms, or at all.

To finance our future ongoing operations, and future capital needs, we may require additional funds through the issuance of additional equity or debt securities. Depending on the type and terms of any financing we pursue, stockholders' rights and the value of their investment in our common stock could be reduced. Any additional equity financing will dilute shareholdings. If the issuance of new securities results in diminished rights to holders of our common stock, the market price of our common stock could be negatively impacted. New or additional debt financing, if available, may involve restrictions on financing and operating activities. In addition, if we issue secured debt securities, the holders of the debt would have a claim to our assets that would be prior to the rights of stockholders until the debt is paid. Interest on such debt securities would increase costs and negatively impact operating results.

We have a shelf registration statement on file with the SEC to provide us with capacity to publicly offer common stock, preferred stock, warrants, debt, convertible or exchangeable securities, depositary shares, or units, or any combination thereof. We may, from time to time, raise capital under our shelf registration statement in amounts, at prices, and on terms to be announced when and if any securities are offered. The shelf registration statement expires on September 24, 2024.

If we are unable to obtain additional financing, as needed, at competitive rates, our ability to fund our current operations and implement our business plan and strategy will be affected. These circumstances may require us to reduce the scope of our operations and scale back our exploration, development and mining programs. There is, however, no guarantee that we will be able to secure any additional funding or be able to secure funding to provide us with sufficient funds to meet our objectives, which may adversely affect our business and financial position. Certain market disruptions may increase our cost of borrowing or affect our ability to access one or more financial markets. Such market disruptions could result from, but are not limited to:

- adverse economic conditions;
- adverse general capital market conditions;
- poor performance and health of the lithium or mining industries in general;
- bankruptcy or financial distress of unrelated lithium companies or marketers;
- significant decrease in the demand for lithium products;
- significant decrease in the price of lithium products; or
- adverse regulatory actions that affect our exploration and construction plans or the use of lithium generally.

Our ability to manage growth will have an impact on our business, financial condition, and results of operations.

Future growth may place strains on our financial, technical, operational, and administrative resources and cause us to rely more on project partners and independent contractors, thus, potentially adversely affecting our financial position and results of operations. Our ability to grow will depend on a number of factors, including, but not limited to:

- our ability to purchase, obtain leases on, or obtain options on properties;
- our ability to identify and acquire new exploratory prospects;
- our ability to develop existing prospects;
- our ability to continue to retain and attract skilled personnel;
- our ability to maintain or enter into new relationships with project partners and independent contractors;
- the results of our exploration programs;
- the market price for lithium products;
- our ability to successfully complete construction projects on schedule, and within budget;
- our access to capital; and
- our ability to enter into agreements for the sale of lithium products.

We may not be successful in upgrading our technical, operational, and administrative resources or increasing our internal resources sufficiently to provide certain services currently provided by third parties. Our inability to achieve or manage growth may materially and adversely affect our business, results of operations, and financial condition.

We may acquire additional businesses or assets, form joint ventures, or make investments in other companies that may be unsuccessful and harm our operating results and prospects.

As part of our business strategy, we may pursue additional acquisitions of complementary businesses or assets or seek to enter into joint ventures. We also may pursue strategic alliances, such as our Sayona Mining investment and our Atlantic Lithium investment, in an effort to leverage our existing operations and industry experience, increase our product offerings, expand our distribution, and make investments in other companies.

The success of any acquisitions, joint ventures, strategic alliances, or investments, including our Sayona Mining investment and Atlantic Lithium investment, will depend on our ability to identify, negotiate, complete and, in the case of acquisitions, integrate those transactions and, if necessary, obtain satisfactory debt or equity financing to fund those transactions. We may not realize the anticipated benefits of any acquisition, joint venture, strategic alliance or investments. We may not be able to integrate acquisitions successfully into our existing business, maintain the key business relationships of businesses we acquire, or retain key personnel of an acquired business. We could assume unknown or contingent liabilities or incur unanticipated expenses. Integration of acquired companies or businesses also may require management resources that otherwise would be available for ongoing development of our existing business. Any acquisitions or investments made by us also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could harm our operating results. In addition, if we choose to issue equity as consideration for any acquisition, our stockholders may experience dilution.

We are dependent upon key management employees.

The responsibility of overseeing the day-to-day operations and the strategic management of our business depends substantially on our senior management and key personnel. Loss of any such personnel may have an adverse effect on our performance. The success of our operations will depend upon numerous factors, many of which, in part, are beyond our control, including our ability to attract and retain additional key personnel in sales, marketing, technical support, and finance. Certain areas in which we operate are highly competitive and competition for qualified personnel is significant. We may be unable to hire suitable field personnel for our technical team or there may be periods of time where a particular position remains vacant while a suitable replacement is identified and appointed. We may not be successful in attracting and retaining the personnel required to grow and operate our business profitably.

Our growth will require new personnel, which we will be required to recruit, hire, train, and retain.

Members of our management team possess significant experience and have previously carried out or been exposed to exploration, development, and production activities. However, we have limited operating history with respect to lithium projects and our ability to achieve our objectives depends on the ability of our directors, officers, and management to implement current plans and respond to any unforeseen circumstances that require changes to those plans. The execution of our exploration, development, and production plans will place demands on us and our management. Thus, our ability to recruit and assimilate new personnel will be critical to our performance. We will be required to recruit additional personnel and to train, motivate, and manage employees, which may adversely affect our plans.

Lawsuits may be filed against us and an adverse ruling in any such lawsuit may adversely affect our business, financial condition, or liquidity or the market price of our common stock.

We may become involved in, named as a party to, or be the subject of, various legal proceedings, including regulatory proceedings, tax proceedings, and legal actions relating to personal injuries, property damage, property taxes, land rights, the environment, and contract disputes. For additional information, refer to Part I, Item 3, "Legal Proceedings."

The outcome of outstanding, pending, or future proceedings cannot be predicted with certainty and may be determined adversely to us and as a result, could have a material adverse effect on our assets, liabilities, business, financial condition, or results of operations. Even if we prevail in any such legal proceeding, the proceedings could be costly, time-consuming, and may divert the attention of management and key personnel from our business operations, which could adversely affect our financial condition.

Our mineral properties may be subject to defects in title.

Title to the majority of our properties for Carolina Lithium are derived from option agreements with local landowners in North Carolina, which, upon exercise, allow us to purchase, or in certain cases, long-term lease the real property and associated mineral rights from the local landowners. If we exercise the option to purchase a property, we will pay cash consideration, approximating the fair market value of the real property, excluding the value of any minerals, plus a premium (at a negotiated fixed price or percentage premium). If we exercise the option for a long-term lease, we will pay annual advanced royalty payments per acre. Some landowners also retain a production royalty payable on production of ore from the property.

The ownership and title to unpatented mining claims and concessions are often uncertain and may be contested. We also may not have, or may not be able to obtain, all necessary rights to develop a property. Although we have obtained title opinions with respect to certain of our properties and have taken reasonable measures to ensure proper title to our properties, there is no guarantee that title to any of our properties will not be challenged or impugned. Title insurance is generally not available for mineral properties and our ability to ensure that we have obtained "clear title" to individual mineral properties or mining concessions may be severely constrained. Our mineral properties may be subject to prior unregistered agreements, transfers or claims, and title may be affected by, among other things, undetected defects. We may incur significant costs related to defending the title to our properties. A successful claim contesting our title to a property may cause us to compensate other persons or perhaps reduce our interest in the affected property or lose our rights to explore and develop that property. This could result in our not being compensated for our prior expenditures relating to the property. Also, in any such case, the investigation and resolution of title issues would divert our management's time from ongoing exploration and, if warranted, development programs. Any impairment or defect in title could negatively affect us.

Our directors may be in a position of conflict of interest.

Some of our directors and officers currently serve as directors and officers of other companies involved in natural resource exploration, development and production, and any of our directors may serve in such positions in the future. As of the date of this Annual Report, none of our directors or officers serves as an officer or director of a lithium exploration, development or producing company nor possess a conflict of interests with our business, other than as follows: (i) pursuant to our agreements related to our Sayona Mining investment, Keith Phillips, our President and Chief Executive Officer, was appointed as a board member of Sayona Quebec, and (ii) pursuant to our agreements related to our Atlantic Lithium investment, Patrick Brindle, our Executive Vice President and Chief Operating Officer, was appointed as a member of the technical committee of Atlantic Lithium. However, there exists the possibility that they may be in a position of conflict of interest in the future. Any decision made by such persons involving us will be made in accordance with their duties and obligations to deal fairly and in good faith with us and such other companies. In addition, any such directors will declare, and refrain from voting on, any matter in which such directors may have a material interest.

Our business is subject to cybersecurity risks.

Our operations depend on effective and secure information technology systems. Threats to information technology systems, such as cyberattacks and cyber incidents, continue to increase. Cybersecurity risks include, but are not limited to, malicious software, attempts to gain unauthorized access to our data and the unauthorized release, corruption or loss of our data and personal information, as well as interruptions in communication and operations.

It is possible that our business, financial, and other systems could be compromised, which could go unnoticed for a prolonged period of time. We have not experienced a material breach of our information technologies. Nevertheless, we continue to take steps to mitigate these risks by employing a variety of measures, including employee training, technical security controls, and maintenance of backup and protective systems. Despite these mitigation efforts, cybersecurity attacks and other threats exist and continue to increase, any of which could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

We do not control our equity method investments.

We apply the equity method to investments when we have the ability to exercise significant influence over the operational decision-making authority and financial policies of the investee, but we do not exercise control. Our equity method investees are governed by their own board of directors, whose members have fiduciary duties to the investees' shareholders. While we have certain rights to appoint representatives to the investees' boards of directors, the interests of the investees' shareholders may not align with our interests or the interests of our shareholders.

In addition, we are generally dependent on the management team of our investees to operate and control such projects or businesses. While we may exert influence pursuant to our positions, as applicable, on the boards of directors and through certain limited

governance or oversight roles, such influence may be limited. The management teams of our investees may not have the level of experience, technical expertise, human resources, management, and other attributes necessary to operate their projects or businesses optimally, and they may not share our business priorities. This could have a material adverse effect on the value of such investments as well as our growth, business, financial condition, results of operations, and prospects.

In order to manage our growth effectively and support our future operations, we expect to improve our financial and operations systems.

To manage our growth and support our future manufacturing operations, we will need to upgrade our operational and financial systems and procedures. This requires management time and may result in significant expense. In 2022, we replaced our legacy Enterprise Resource Planning system to improve financial reporting controls and accommodate our expanding operations. We cannot be certain that we will institute, in a timely or efficient manner or at all, the improvements to our managerial, operational, and financial systems and procedures necessary to support our anticipated increased levels of operations. Problems associated with, or disruptions resulting from, any improvement or expansion of our operational and financial systems could adversely affect our relationships with our suppliers and customers, inhibit our ability to expand or take advantage of market opportunities, cause harm to our reputation, result in errors in our financial and other reporting, and affect our ability to maintain an effective internal control environment and meet our external reporting obligations, any of which could harm our business and operating results and affect our stock price.

If we do not satisfy the terms of our DOE grant, we may not receive the entire amount or any of the grant funding we were pre-awarded.

We have been selected to receive a \$141.7 million grant under the Bipartisan Infrastructure Law to advance the expansion of domestic manufacturing of batteries for electric vehicles. As part of the Company's selection for this DOE grant, we have been invited to negotiate the specific terms of the grant, including timing and any co-funding. Any final grant award is subject to these negotiations. Once the grant agreement has been finalized, funding of the grant will remain subject to satisfaction, from time to time, of conditions and financial reporting requirements set forth in the final grant agreement. If we are unable to meet the obligation of the grant agreement, we may be unable to take advantage of all or part of the entire award, and/or be subject to penalties in the grant agreement, such as ineligibility for continued participation in the grant program. We cannot assure that we will have the ability to meet any or all grant requirements necessary to receiving grant funding and/or the grant agreement will not be terminated prior to receiving any or all the grant funds.

Regulatory and Industry Risks

We will be required to obtain governmental permits and approvals in order to conduct development and mining operations, a process that is often costly and time-consuming. There is no certainty that all necessary permits and approvals for our planned operations will be granted.

We are required to obtain and renew governmental permits and approvals for our exploration and development activities and, prior to mining any mineralization we discover, we will be required to obtain additional governmental permits and approvals that we do not currently possess. Obtaining and renewing any of these governmental permits is a complex, time consuming and uncertain process involving numerous jurisdictions, public hearings, and possibly costly undertakings. The timeliness and success of permitting efforts are contingent upon many variables not within our control, including the interpretation of approval requirements administered by the applicable governmental authority.

We may not be able to obtain or renew permits or approvals that are necessary to our planned operations, or we may discover that the cost and time required to obtain or renew such permits and approvals exceeds our expectations. Any unexpected delays, costs or conditions associated with the governmental approval process could delay our planned exploration, development and mining operations, which in turn could materially adversely affect our prospects, revenues, and profitability. In addition, our prospects may be adversely affected by the revocation or suspension of permits or by changes in the scope or conditions to use of any permits obtained.

For example, in addition to the permits that we have been issued to date, we are required to obtain other permits and approvals before construction or operations of Carolina Lithium, including approvals related to zoning, rezoning, mining, mineral concentration, and chemical manufacturing. Such permits include a state mining permit that would be issued by the North Carolina DEMLR, an air permit that would be issued by the DAQ, rezoning that would be approved by the Gaston County Board of Commissioners, and, potentially, a Special Use or Conditional Permit that would be approved by the Gaston County Board. The following permits have been submitted for Carolina Lithium: (1) Mine Permit to DEMLR on August 30, 2021, (2) Prevention of Significant Deterioration ("PSD") Title V Air Permit to the DAQ on August 31, 2022, and NPDES permits to the NCDEQ Division of Water Resources on December 28, 2022.

Private parties, such as environmental activist organizations, frequently attempt to intervene in the permitting process to persuade regulators to deny necessary permits or seek to overturn permits that have been issued. These third-party actions can materially increase the costs, cause delays in the permitting process, and could cause us to not proceed with the development or operation of a property. In addition, our ability to successfully obtain key permits and approvals to explore for, develop, operate, and expand operations will likely depend on our ability to undertake such activities in a manner consistent with the creation of social and economic benefits in the surrounding communities, which may or may not be required by law. Our ability to obtain permits and approvals and to successfully operate in particular communities may be adversely affected by real or perceived detrimental events associated with our activities.

Certain members of the Gaston County Board have indicated opposition to the granting of approvals necessary for Carolina Lithium. In September 2021, the Gaston County Board approved updates to the Gaston County Unified Development Ordinance which, in part, established certain operating limitations for new mines and quarries within the county. It also established that new mines and quarries must be located on industrially-zoned property and require a Special Use Permit approved by the Gaston County Board. While we have initiated a dialog with the Gaston County Board, we are unable to predict the duration, scope, result, or related costs or conditions associated with the Boards' review, nor can we assure you that we will be successful in obtaining required local approvals.

Tennessee Lithium, which was announced on September 1, 2022, is being designed as a lithium hydroxide manufacturing facility in the city of Etowah, McMinn County, Tennessee. Similar to Carolina Lithium, we are required to obtain governmental permits and approvals, which we do not currently possess, prior to constructing and operating this project. We have also submitted our Conditional Major non-Title V Air Permit to TDEC for our Tennessee Lithium project on October 31, 2022. Other permits to be obtained include a construction stormwater permit from TDEC, a municipal wastewater permit from the City of Etowah, as well as permits for post construction stormwater controls.

The proposed Carolina Lithium project will be subject to significant governmental regulations, including the U.S. Federal Mine Safety and Health Act.

Mining activities in the U.S. are subject to extensive foreign, federal, state, and local laws and regulations governing environmental protection, natural resources, prospecting, development, production, post-closure reclamation, taxes, labor standards, and occupational health and safety laws and regulations, including mine safety, toxic substances, and other matters. The costs associated with compliance with such laws and regulations are substantial. In addition, changes in such laws and regulations, or more restrictive interpretations of current laws and regulations by governmental authorities, could result in unanticipated capital expenditures, expenses, or restrictions on or suspensions of our operations and delays in the development of our properties.

The planned Tennessee Lithium project will be dependent upon our ability to source spodumene concentrate feedstock to be converted to lithium hydroxide at the facility.

Tennessee Lithium will depend upon sourcing spodumene concentrate to produce lithium hydroxide. We intend to provide spodumene concentrate to Tennessee Lithium from our international assets, primarily Ewoyaa in Ghana. However, we cannot guarantee our ability to source spodumene concentrate, and our inability to do so would negatively impact our ability to produce lithium hydroxide in Tennessee.

Compliance with environmental regulations and litigation based on environmental regulations could require significant expenditures.

Environmental regulations mandate, among other things, the maintenance of air and water quality standards, land development, and land reclamation, and set forth limitations on the generation, transportation, storage, and disposal of solid and hazardous waste. Environmental legislation is evolving in a manner that may require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects, and a heightened degree of responsibility for mining companies and their officers, directors, and employees. In connection with our current exploration activities or in connection with our prior mining operations, we may incur environmental costs that could have a material adverse effect on financial condition and results of operations. Any failure to remedy an environmental problem could require us to suspend operations or enter into interim compliance measures pending completion of the required remedy.

Moreover, governmental authorities and private parties may bring lawsuits based upon damage to property and injury to persons resulting from the environmental, health, and safety impacts of prior and current operations, including operations conducted by other mining companies many years ago at sites located on properties that we currently own or formerly owned. These lawsuits could lead to the imposition of substantial fines, remediation costs, penalties, and other civil and criminal sanctions, as well as reputational harm.

including damage to our relationships with customers, suppliers, investors, governments or other stakeholders. Such laws, regulations, enforcement, or private claims may have a material adverse effect on our financial condition, results of operations, or cash flows.

Lithium and lithium byproduct prices are subject to unpredictable fluctuations.

We expect to derive revenues, if any, from the extraction and sale of lithium and lithium byproducts. The prices of lithium and lithium byproducts may fluctuate widely and are affected by numerous factors beyond our control, including international, economic, and political trends, expectations of inflation, currency exchange fluctuations, interest rates, global or regional consumptive patterns, speculative activities, increased production due to new extraction developments and improved extraction and production methods and technological changes in the markets for the end products. The effect of these factors on the prices of lithium and lithium byproducts, and therefore the economic viability of any of our exploration properties, cannot accurately be predicted.

Additionally, new production of lithium hydroxide or lithium carbonate from current or new competitors in the lithium markets could adversely affect prices. In recent years, new and existing competitors have increased the supply of lithium hydroxide and lithium carbonate, which has affected pricing. Further production increases could negatively affect prices. There is limited information on the status of new lithium hydroxide production capacity expansion projects being developed by current and potential competitors and, as such, we cannot make accurate projections regarding the capacities of possible new entrants into the market and the dates on which they could become operational. If these potential projects are completed in the short term, they could adversely affect market lithium prices, thereby resulting in a material adverse effect on the economic feasibility of extracting any mineralization we discover and reducing or eliminating any reserves we identify.

Changes in technology or other developments could adversely affect demand for lithium compounds or result in preferences for substitute products.

Lithium and its derivatives are preferred raw materials for certain industrial applications, such as rechargeable batteries. For example, current and future high energy density batteries for use in electric vehicles will rely on lithium compounds as a critical input. The pace of advancements in current battery technologies, development and adoption of new battery technologies that rely on inputs other than lithium compounds, or a delay in the development and adoption of future high nickel battery technologies that utilize lithium hydroxide could significantly impact our prospects and future revenues. Many materials and technologies are being researched and developed with the goal of making batteries lighter, more efficient, faster charging, and less expensive, some of which could be less reliant on lithium hydroxide or other lithium compounds. Some of these technologies, such as commercialized battery technologies that use no, or significantly less, lithium compounds, could be successful and could adversely affect demand for lithium batteries in personal electronics, electric and hybrid vehicles, and other applications. We cannot predict which new technologies may ultimately prove to be commercially viable and on what time horizon. In addition, alternatives to industrial applications dependent on lithium compounds may become more economically attractive as global commodity prices shift. Any of these events could adversely affect demand for and market prices of lithium, thereby resulting in a material adverse effect on the economic feasibility of extracting any mineralization we discover and reducing or eliminating any reserves we identify.

Our growth depends upon the continued growth in demand for electric vehicles with high performance lithium compounds.

We plan to be one of a few producers of performance lithium compounds that are a critical input in current and next generation high energy density batteries used in electric vehicle applications. Our growth is dependent upon the continued adoption of electric vehicles by consumers. If the market for electric vehicles does not develop as we expect, or develops more slowly than we expect, our business, prospects, financial condition, and results of operations will be affected. The market for electric vehicles is relatively new, rapidly evolving, and could be affected by numerous external factors, such as:

- government regulations and automakers' responses to these regulations;
- tax and economic incentives;
- rates of consumer adoption, which is driven in part by perceptions about electric vehicle features (including range per charge), quality, safety, performance, cost, and charging infrastructure;
- competition, including from other types of alternative fuel vehicles, plug-in hybrid electric vehicles, and high fuel-economy internal combustion engine vehicles;
- volatility in the cost of battery materials, oil, and gasoline;
- rates of customer adoption of higher performance lithium compounds; and
- rates of development and adoption of next generation high nickel battery technologies.

Our operations may be further disrupted, and our financial results may be adversely affected by the novel coronavirus pandemic.

The COVID-19 pandemic has the potential to continue to pose a material risk to our business and operations. If a significant portion of our workforce or consultants become unable to work or travel to our operations due to illness or state or federal government restrictions (including travel restrictions and "shelter-in-place" and similar orders restricting certain activities that may be issued or extended by authorities), we may be forced to reduce or suspend our exploration and development activities.

The COVID-19 pandemic had a broad impact globally and may materially affect us economically, although progress has been made in the development and distribution of vaccines. The scope and duration of COVID-19's economic impact may be difficult to assess or predict, but COVID-19 has negatively impacted global economic conditions, which, in turn, could adversely affect our business, results of operations and financial condition. In addition, a recession or market correction resulting from COVID-19 could materially affect our business and the value of our common stock.

It is not possible to estimate the full and complete impact that COVID-19 could have on our business, results of operations and financial condition. The extent to which the COVID-19 pandemic will impact our financial condition will depend on future developments that are highly uncertain and cannot be predicted, including new government actions or restrictions, new information that may emerge concerning the severity, longevity and impact of the COVID-19 pandemic on economic activity.

As of December 31, 2022, the effects from the COVID-19 pandemic have not had a material impact on our financial results or operations. However, the effects from the COVID-19 pandemic could have a material impact on our operations, and we will continue to closely monitor the COVID-19 situation.

Risks Related to an Investment in Our Common Stock

The market price and trading volume of our common stock may be volatile and may be affected by economic conditions beyond our control.

The market price of our common stock may be highly volatile and subject to wide fluctuations. In addition, the trading volume of our common stock may fluctuate and cause significant price variations to occur. If the market price of our common stock declines significantly, you may be unable to resell your shares of our common stock at or above the purchase price, if at all. We cannot assure you that the market price of our common stock will not fluctuate or significantly decline in the future.

Some specific factors that could negatively affect the price of our common stock or result in fluctuations in their price and trading volume include:

- actual or expected fluctuations in our prospects or operating results;
- changes in the demand for, or market price of lithium, lithium hydroxide, or lithium-ion batteries;
- additions to or departures of our key personnel;
- changes or proposed changes in laws and regulations;
- changes in trading volume of our common stock on Nasdaq;
- sales or perceived potential sales of our common stock by us, our directors, senior management, or our stockholders in the future;
- announcement or expectation of additional financing efforts;
- conditions in the financial markets or changes in general economic and political conditions and events;
- market conditions or investor sentiment in the broader stock market, or in our industry in particular;
- introduction of new products and services by us or our competitors;
- issuance of new or changed securities analysts' reports or recommendations;
- litigation and governmental investigations; and
- changes in investor perception of our market positions based on third-party information.

In addition, when the market price of a stock is volatile, certain holders of that stock may institute securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit or any future securities class litigation that may be brought against us.

We incur significant costs as a result of being publicly traded in the U.S. and Australia.

As a company whose common stock is publicly traded in both the U.S. and Australia, we incur significant legal, accounting, insurance, and other expenses related to compliance with applicable regulations. Our management and other personnel devote a substantial amount of time to these compliance initiatives, and we may need to continue to add additional personnel and build our internal compliance infrastructure.

Our common stock is publicly traded on the ASX in the form of CDIs. As a result, we must comply with the ASX Listing Rules. We have policies and procedures that we believe are designed to provide reasonable assurance of our compliance with the ASX Listing Rules. If, however, we do not follow those procedures and policies, or they are not sufficient to prevent non-compliance, we could be subject to liability, fines, and lawsuits. These laws, regulations, and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts to comply with new laws, regulations, and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Some provisions of Delaware law and our certificate of incorporation and bylaws may deter third parties from acquiring us or limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our certificate of incorporation and bylaws provide for, among other things:

- a staggered board and restrictions on the ability of our stockholders to fill a vacancy on the Board;
- the authorization of undesignated preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- advance notice requirements for stockholder proposals;
- a requirement that, except as otherwise provided for or fixed with respect to actions required or permitted to be taken by holders of preferred stock, no action that is required or permitted to be taken by the stockholders may be affected by consent of stockholders in lieu of a meeting of stockholders;
- permit the Board to establish the number of directors;
- a provision that the Board is expressly authorized to adopt, amend, or repeal our amended and restated bylaws;
- a provision that stockholders can remove directors only for cause and only upon the approval of not less than 66 2/3 of all outstanding shares of our voting stock;
- a requirement that the approval of not less than 66 2/3 of all outstanding shares of our voting stock to adopt, amend, or repeal certain provisions of our bylaws and certificate of incorporation; and
- limit the jurisdictions in which certain stockholder litigation may be brought.

These anti-takeover defenses could discourage, delay, or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors of their choosing and cause us to take other corporate actions than desired.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the sole and exclusive forum for any complaint asserting any internal corporate claims (including claims in the right of the Company that are based upon a violation of a duty by current or former director, officer, employee, or stockholder in such capacity, or as to which the Delaware General Corporation Law confers jurisdiction upon the Court of Chancery) or a cause of action arising under the Securities Act. This provision shall not apply to suits brought to enforce a duty or liability created by the Exchange Act. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees. If a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business. For example, under the Securities Act, federal courts have concurrent jurisdiction over all suits brought to enforce any duty or liability created by the Securities Act, and investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

We do not anticipate paying dividends in the foreseeable future.

We have not declared any dividends during the year ended December 31, 2022, the six months ended December 31, 2021 or for the years ended June 30, 2021 or 2020, and do not anticipate that we will do so in the foreseeable future. We currently intend to retain future earnings, if any, to finance the development of our business. Dividends, if any, on our outstanding shares of common stock will be declared by and subject to the discretion of the Board on the basis of our earnings, financial requirements and other relevant factors. As a result, a return on your investment will only occur if our common stock price appreciates. We cannot assure you that our common stock will appreciate in value or even maintain the price at which you purchase shares of our common stock. You may not realize a return on your investment in our common stock, and you may even lose your entire investment in our common stock. Therefore, you should not rely on an investment in our common stock as a source for any future dividend income.

If U.S. securities or industry analysts do not publish research reports about our business, or if they issue an adverse opinion about our business, the market price and trading volume of our common stock could decline.

The trading market for our common stock will be influenced by the research and reports that U.S. securities or industry analysts publish about us or our business. Securities and industry analysts may discontinue research on us, to the extent such coverage currently exists, or in other cases, may never publish research on us. If no or too few U.S. securities or industry analysts commence coverage of our Company, the trading price for our common stock would likely be negatively affected. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, the market price of our common stock would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our price and trading volume to decline. In addition, research and reports that Australian securities or industry analysts publish about us, our business or our common stock may impact the market price of our common stock.

Unstable market and economic conditions may have serious adverse consequences on our business and financial condition.

Global credit and financial markets have experienced extreme disruptions at various points over the last few decades, characterized by diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. If another such disruption in credit and financial markets and deterioration of confidence in economic conditions occurs, our business may be adversely affected. If the equity and credit markets were to deteriorate significantly in the future, it may make any necessary debt or equity financing more difficult to complete, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance, and share price and could require us to delay or abandon development or commercialization plans. In addition, there is a risk that one or more of our service providers, manufacturers, or other partners would not survive or be able to meet their commitments to us under such circumstances, which could directly affect our ability to attain our operating goals on schedule and on budget.

Sales of our common stock, or the perception that such sales may occur, could depress the price of our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could depress the market price of our common stock. We have filed a registration statement registering under the Securities Act the shares of our common stock reserved for issuance under our Stock Incentive Plan, including shares issuable upon exercise of outstanding options. These shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. Further, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt or equity securities. If we issue common stock or securities convertible into our common stock, our common stockholders would experience additional dilution and, as a result, the price of our common stock may decline.

Item 1B. UNRESOLVED STAFF COMMENTS.

Not Applicable.

Item 2. PROPERTIES.

We lease our corporate headquarters in Belmont, North Carolina, and we may lease additional office space in Belmont, North Carolina to accommodate our growing workforce. We also lease office space in Cherryville, North Carolina. We own and lease properties in Gaston County, North Carolina, primarily for the principal use of current development activities for Carolina Lithium. We expect to further our principal use to include mining, development and production of lithium hydroxide and other lithium products and byproducts.

In connection with Tennessee Lithium, we hold a contractual option to purchase property, subject to due diligence, located in the North Etowah Industrial Park in the City of Etowah in McMinn County, Tennessee, which is approximately 62 miles southwest of Knoxville, Tennessee and 60 miles northeast of Chattanooga, Tennessee. We have no ownership interest in the property at this time. If purchased, the property would be the site for our planned lithium hydroxide conversion plant as well as local office space.

We classify our mineral properties into three categories: "Operating Properties," "Development Properties," and "Exploration Properties." Operating Properties are properties with material extraction of mineral reserves. Development Properties are properties that have mineral reserves disclosed but no material extraction. Exploration Properties are properties that have no mineral reserves disclosed. As of the date of this report we did not own any operating or exploration properties. We have no properties in the production stage and no other properties are considered material under S-K 1300. In addition to our wholly-owned properties, our equity method investments have various projects in multiple stages of development. For a discussion of our non-material properties associated with our equity method investments, see "Equity Method Investment Projects" below.

Tennessee Lithium

Tennessee Lithium is expected to be a world-class lithium hydroxide production facility located within McMinn County in Etowah, Tennessee. With first production targeted by the end of 2025 or 2026, the facility is expected to produce 30,000 metric tons per year of lithium hydroxide, doubling the current estimated U.S. production capacity of 15,000 metric tons per year. The plant is expected to be one of the most sustainable lithium hydroxide operations in the world and among the first to use the innovative Metso:Outotec Pressure Leach Technology. As of December 31, 2022, we did not own any property associated with Tennessee Lithium.

Carolina Lithium

Overview

Carolina Lithium is a development stage project for the mining, development and production of lithium products. The property is located in a rural area of Gaston County, North Carolina, approximately 25 miles northwest of the City of Charlotte. The property is centered at approximately 35°23'20"N 81°17'20"W. The property currently has no known encumbrances. In addition to the information summarized below, you can learn more about Carolina Lithium by reading the Amended Technical Report Summary dated February 27, 2023 ("TRS" or "Amended TRS") that is attached as Exhibit 96.1 to our Annual Report.

Spodumene Concentrate Operation

The TRS for Carolina Lithium is based on a mine life of 11 years of mineral reserves, with an estimated average annual production of 242,000 metric tons of spodumene concentrate at steady-state.

We believe there is significant opportunity to increase the mineral reserve life of Carolina Lithium beyond 11 years by conversion of existing mineral resources to mineral reserves or by discovery of additional resources within the Carolina Tin-Spodumene Belt within a reasonable trucking or conveying distance to the proposed spodumene concentrator.

Lithium Hydroxide Conversion Operation

The TRS for Carolina Lithium assumes a lithium hydroxide conversion plant, also referred to as a chemical plant, that will be supported with spodumene concentrate produced from our mineral reserves. The lithium hydroxide chemical plant has an estimated production rate of 30,000 metric tons of lithium hydroxide per year.

Our business plan is, upon depletion of our mineral reserves, to continue lithium hydroxide production at Carolina Lithium using spodumene concentrate sourced from offtake agreements, which will allow us to secure spodumene concentrate from alternate sources or from our own mineral reserves if our estimation of mineral reserves was increased in the future.

Operating and Capital Costs

According to the TRS results, our integrated Carolina Lithium project is projected to have an average cash operating cost of approximately \$4,844 per metric ton of lithium hydroxide at steady state during the first 10 years of operations, including royalties and exclusive of any byproduct credits, thereby potentially positioning Piedmont Lithium as one of the industry's lowest-cost producers. The TRS estimates, in accordance with the Association the Advancement of Cost Engineering class 3 level of detail, total capital costs of approximately \$1 billion for the construction of the fully integrated Carolina Lithium project, inclusive of potential recovery of byproduct mineral resources.

Ownership and Location

We hold a 100% interest in Carolina Lithium which is located approximately 25 miles north west of Charlotte, North Carolina in the U.S.

History

Carolina Lithium lies within the Carolina Tin-Spodumene Belt. Mining in the belt began in the 1950s with the Kings Mountain Mine, currently owned by Albemarle Corporation, and the Hallman-Beam Mine near Bessemer City, North Carolina, which is currently owned by Martin Marietta Corporation. Both former mines are located within approximately 12 miles of Carolina Lithium to the south, near Bessemer City, North Carolina, and Kings Mountain, North Carolina, respectively. Portions of the project area were explored and excavated to shallow depths in the 1950s as the Murphy-Houser Mine, owned by the Lithium Corporation of America. In 2009, Vancouver based North Arrow Minerals Inc. commenced exploration at the property. In 2016, we began optioning surface and mineral rights at the property and subsequently commenced a renewed exploration effort at the site.

Present Condition, Work Completed, and Exploration Plans

General access to Carolina Lithium is via a network of primary and secondary roads. Interstate highway I-85 lies 6 miles to the south of the project area and provides easy access to Charlotte Douglas International Airport, which is approximately 19 miles to the east. A rail line borders the property to the northwest. Transport links provide access to Charlotte, which is the largest city based on size and population in North Carolina, within approximately 25 miles from Carolina Lithium. Extensive exploration supports our resource estimate and is comprised of surface mapping and extensive subsurface drilling. Between 2017 and 2021, we completed five phases of exploratory drilling which included a total of 542 core holes amounting to approximately 50 miles to define the Core property deposit. The exploration of Carolina Lithium has been performed by professional geologists in adherence to established operating procedures that have been verified by the qualified person ("QP"). Through the date of this report, exploration has been concentrated on the Core, Central, and Huffstetler deposit areas detailed in Figure 2 below.

Properties

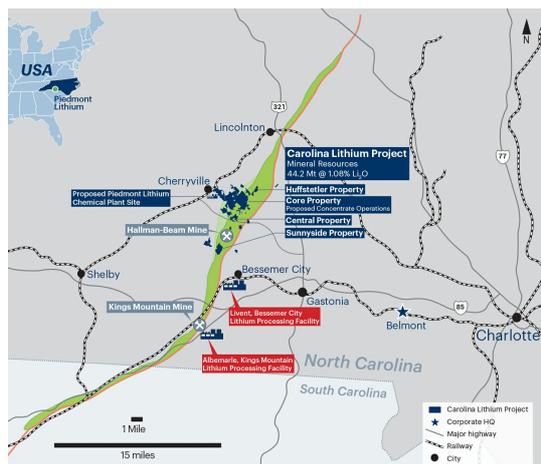


Figure 1

As of December 31, 2022, Carolina Lithium, was comprised of real property and associated mineral rights totaling approximately 3,245 acres, of which approximately:

- 162 parcels consisting of 2,277 acres are owned with a book value of \$53.2 million;
- 1 parcel consisting of 113 acres is subject to long-term leases with a book value of \$0.2 million;
- 1 parcel consisting of 10 acres is subject to lease-to-own agreements with a book value of \$0.5 million; and
- 110 parcels consisting of 1,096 acres are subject to exclusive option agreements with a book value of \$2.3 million. These exclusive option agreements, upon exercise, allow us to purchase or, in some cases, enter into long-term lease agreements for the real property and associated mineral rights. Our option agreements provide for annual option payments, bonus payments during periods when we conduct drilling, and royalty payments during periods when we conduct mining. Our option agreements generally provide us with an option to purchase the optioned property at a specified premium over fair market value. Upon exercise of our purchase option, our obligation to make annual option payments and bonus payments terminates.

We generally control all the surface and mineral rights for Carolina Lithium under applicable agreements. We also own real property totaling 5 acres in Bessemer City, North Carolina, where we lease a warehouse for core samples from Carolina Lithium, and 61 acres in Kings Mountain, North Carolina, where we hold a synthetic minor air permit and which was the subject of prior technical studies for a planned lithium hydroxide conversion facility.

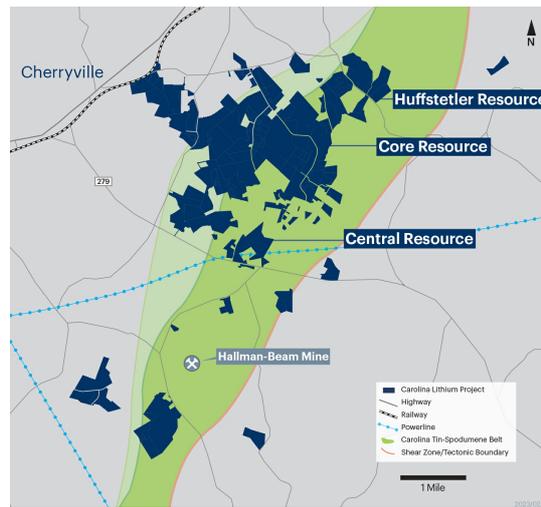


Figure 2

Mineral Reserves

A "mineral reserve" is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the QP, can be the basis of an economically viable project. Specifically, mineral reserve is the economically mineable part of a measured or indicated mineral resource, which in our case excludes diluting materials and allowances for losses that may occur when the material is mined or extracted. The term "economically viable," as used in the definition of reserve, means that the QP has analytically determined that extraction of the mineral reserve is economically viable under reasonable investment and market assumptions.

The term "proven reserves" means the economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource. The term "probable reserves" means mineral reserves for which quantity and grade are computed from information similar to that used for proven reserves, but the sites for sampling are farther apart or are otherwise less closely spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.

Proven and probable mineral reserves are based on extensive drilling, sampling, mine modeling, and metallurgical testing from which we determined economic feasibility. The reference point for mineral reserves is the undiluted ore, excluding dilution material, delivered to our spodumene concentrator. The price sensitivity of mineral reserves depends upon several factors including grade, metallurgical recovery, operating cost, and waste-to-ore ratio. The mineral reserves table below lists the estimated metallurgical recovery rate for Carolina Lithium, which includes the estimated recovery of both spodumene concentrate and conversion to lithium hydroxide. The cut-off grade, or lowest grade of mineralization considered economic to process, depends upon prevailing economic conditions, estimated mineability of our deposit, and amenability of the mineral reserve to spodumene concentration and conversion to lithium hydroxide.

Carolina Lithium does not contain any proven mineral reserves at this time. The probable reserve figures presented herein are estimates based on information available at the time of calculation. No assurance can be given that the estimated levels of

metallurgical recovery of lithium minerals will be realized. Metric tons of ore containing lithium minerals included in the proven and probable reserves are those contained prior to losses during metallurgical treatment. Reserve estimates may require revision based on actual production. Market fluctuations in the price of lithium hydroxide, as well as increased production costs or reduced metallurgical recovery rates, could render certain proven and probable reserves containing higher cost reserves uneconomic to exploit and might result in a reduction of mineral reserves.

We have reported mineral reserves, prepared in accordance with S-K 1300, as part of our exploration and evaluation activities. As of December 31, 2022, we have reported 18.3 million metric tons of probable mineral reserves at a grade of 1.10% Li₂O. We issued our first mineral resource estimate on October 21, 2021 and have not finalized any new estimates. The proven and probable reserve figures presented herein are estimates based on information available at the time of calculation. Mineral resources disclosed in the prior year have been updated to conform with S-K 1300 disclosure requirements, and we have amended the estimated mineral reserve tables below to present resources exclusive of reserves.

A Technical Report Summary with respect to our estimated mineral reserves was filed as an exhibit to our Transition Report for the six-month period ending December 31, 2021. This Technical Report Summary was amended to include certain information as required by Item 1300 of Regulation S-K. The Amended Technical Report Summary dated February 27, 2023, is filed as Exhibit 96.1 to this Form 10-K. We publish reserves annually, and will recalculate reserves if any new significant changes are expected, taking into account metal prices, changes, if any, to future production and capital costs, divestments and depletion as well as any acquisitions and additions during the period.

Probable mineral reserves have been estimated and based on the consideration of pertinent modifying factors, inclusive of geological, environmental, regulatory and legal factors, in converting a portion of the mineral resources to mineral reserves. All converted mineral resources were classified as probable mineral reserves. There were no measured mineral resources defined that could be converted into proven mineral reserves, and no inferred mineral resources were included in the estimation of mineral reserves. A cutoff grade of 0.4% Li₂O was used in creation of the block model. An open pit mining method was selected due to the ore body outcropping in several places along the surface. No other mining method was evaluated as part of the mineral reserves estimation. Mine design parameters include overburden batter angle in unconsolidated material of 27 degrees, face batter angle of 75 degrees, inter-ramp slope of 57 degrees, overall slope of 51 degrees, berm width of 31 feet, berm height working 39 feet, berm height final wall of 78 feet, ramp width of 98 feet, ramp grade of 10%, mine dilution of 10%, process recovery for spodumene concentrate of 77%, and minimum mining width of 164 feet.

Operating costs were established using budget pricing from mining contractors based on a request for proposal issued by our third-party consultant, Marshall Miller and Associates, combined with first principles estimates for utilities including electrical service from Duke Energy. Royalties of \$1.00 per run-of-mine metric ton are based on the average land option agreement.

Mineral reserves include tonnage estimates for Li₂O, Lithium Carbonate Equivalent ("LCE"), whereby one metric ton of Li₂O is equivalent to 2.473 metric tons of LCE, and lithium hydroxide monohydrate ("LiOH·H₂O") tonnage, whereby one metric ton of Li₂O is equivalent to 2.81 metric tons of LiOH·H₂O.

The following tables detail proven and probable reserves reflecting only those reserves attributable to our ownership or economic interest as of December 31, 2022 and 2021, and have been prepared in accordance with S-K 1300.

Carolina Lithium – Estimate of Mineral Reserves (undiluted)

Mineral Reserves Category	Li ₂ O (metric tons) ⁽¹⁾	Grade (Li ₂ O%)	Li ₂ O (metric tons)	LCE (metric tons)	LiOH·H ₂ O (metric tons)	Cut-Off Grade (% Li ₂ O)	Metallurgical Recovery Concentrator (%) ⁽²⁾	Metallurgical Recovery Conversion Plant (%) ⁽³⁾
Proven	-	-	-	-	-	0.4	77	91
Probable	18.26	1.10	200,000	495,000	562,000			

(1) Reserves are expressed as tonnages effectively delivered to a run-of-mine ("ROM") pad, prior to the application of losses and recovery factors (i.e., metallurgical recovery as expressed above) incurred during concentration and conversion. Pricing to support mineral reserve economics is based upon the sale of lithium hydroxide, after the processing of ROM reserves in the Company's planned spodumene concentrator and lithium hydroxide conversion facilities. Mineral reserves estimated exclusive of the mineral resources (in millions).

(2) Metallurgical recovery of 77-percent for lithium ore is associated with the production of a 6-percent spodumene concentrate.

(3) Metallurgical recovery of 91-percent is associated with the production of lithium hydroxide. Revenue streams for financial modeling assume the production and sale of lithium hydroxide at \$18,000/ metric ton via the processing of spodumene concentrate derived from ROM mineral reserves.

Mineral Resources

The mineral resource figures presented herein are estimates based on information available at the time of calculation and are exclusive of reserves. A "mineral resource" is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade, or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. The reference point for mineral resources is in situ. Mineral resources are subdivided in order of increasing geological confidence into inferred, indicated and measured categories. Metric tons of mineral resources containing spodumene, quartz, feldspar and mica, included in the measured, indicated, and inferred resources, are those contained prior to losses during metallurgical treatment. The terms "measured resource," "indicated resource," and "inferred resource" mean the part of a mineral resource for which quantity and grade or quality are estimated on the basis of geological evidence and sampling that is considered to be comprehensive, adequate, or limited, respectively.

Market fluctuations in the price of lithium hydroxide as well as increased production costs or reduced metallurgical recovery rates, could change future estimates of resources. We have reported mineral resources, prepared in accordance with S-K 1300, as part of our exploration and evaluation activities. As of December 31, 2022, we have reported 25.89 million metric tons of mineral resources, exclusive of mineral reserves, at a grade of 1.06% Li₂O.

The resource figures presented herein do not include that part of our resources that have been converted to proven and probable reserves as shown above, as they are reported exclusive of reserves, and have been estimated based on information available at the time of calculation. Key assumptions and parameters relating to the mineral reserves and resources are discussed in Sections 1.9 and 1.10 of the Carolina Lithium project TRS filed as Exhibit 96.1 in this Form 10-K.

Resource models are 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 parameters include: maximum pit slope of 51° and strip ratio of 12, mining cost of US\$2.50/per ton, spodumene concentration cost of US\$25/per ton, a commodity value of US\$1,893/per ton of SC6 and with appropriate recovery and dilution factors.

The following table details indicated and inferred resources which have been prepared in accordance with S-K 1300 and are solely attributable to our ownership or economic interest as of December 31, 2022 and 2021.

Carolina Lithium – Summary of Mineral Resources Estimate Exclusive of Mineral Reserves

			Li ₂ O%		Quartz		Feldspar		Mica	
Cut-Off Grade (% Li ₂ O) ⁽¹⁾			0.4		0.4		0.4		0.4	
Metallurgical Recovery (%)			77 ⁽²⁾		50.8		51.1		35.5	
Category	Deposit	Metric Tons ⁽³⁾	Grade (%)	Metric Tons ⁽³⁾	Grade (%)	Metric Tons ⁽³⁾	Grade (Li ₂ O%)	Metric Tons ⁽³⁾	Grade (%)	Metric Tons ⁽³⁾
Indicated	All properties	9.96	1.14	0.112	29.42	2.93	45.96	4.58	3.96	0.39
Inferred	All properties	15.93	1.02	0.162	29.22	4.66	45.67	7.28	4.03	0.64

(1) Based on long-term pricing of \$1,893/per ton of SC6, \$101/per ton of quartz, \$54/per ton of feldspar, and \$80/per ton of mica. Byproduct mineral resources are estimated only from the spodumene bearing pegmatites which comprise the mineral resource estimate. The Carolina Lithium project does not have byproduct mineral reserves.

(2) The overall metallurgical recovery from spodumene concentration.

(3) Mineral resources estimated exclusive of the mineral reserve (in millions).

Comparison of Resources and Reserves as of December 31, 2022 and 2021 and June 30, 2021, and 2020.

We issued our first mineral resource estimate on our North Carolina property in October 2021. No mineral resource estimates were conducted during the current reporting period. We did not have mineral resources estimates or mineral reserves estimates as of June 30, 2021, or 2020. As a result, we are not providing an analysis of changes in estimates for mineral resources and mineral reserves for those periods.

Internal Controls

We have internal controls for reviewing and documenting the information supporting the mineral reserve and mineral resource estimates, describing the methods used, and ensuring the validity of the estimates. These internal control processes were not materially impacted by the adoption of S-K 1300. Information that is utilized to compile mineral reserves and mineral resources is prepared and

certified by appropriate QPs and is subject to our internal review process, which includes review by a QP. The QP and management agree on the reasonableness of the criteria for the purposes of estimating resources and reserves. Calculations using these criteria are reviewed and validated by the QP. We recognize the risks inherent in mineral resource and reserve estimates, such as the geological complexity, interpretation and extrapolation of data, changes in operating approach, macroeconomic conditions and new data, among others. Overestimated resources and reserves resulting from these risks could have a material effect on future profitability.

Equity Method Investment Projects

Sayona Mining

We own an equity interest of approximately 14% in Sayona Mining. During the year ended December 31, 2022, we paid \$1.4 million to Sayona Mining to acquire additional shares as part of equity offerings by Sayona Mining. As of December 31, 2022, we have invested a total of \$20.2 million in Sayona Mining.

Sayona Mining's lithium assets in Quebec Canada include a 75% equity interest in Sayona Quebec, a 60% equity interest in Northern Hub's Moblan project, and a 100% equity interest in Lac Albert. Sayona Mining also holds a 100% equity interest in assets in Western Australian including Western Australia Lithium, Western Australia gold projects, and Kimberley Graphite.

Sayona Quebec

We own a 25% equity interest in Sayona Quebec, with Sayona Mining holding the remaining 75% equity interest as discussed above. Sayona Quebec owns the past-producing NAL project, the Authier Lithium project, and the Tansim Lithium project. Through our strategic partnership, Sayona Quebec is prioritizing the manufacturing of lithium products in Quebec and capitalizing on Quebec's competitive advantages, which include access to skilled labor, strong infrastructure, governmental mining support and zero-carbon, low-cost hydropower. As of December 31, 2022, our investments in Sayona Quebec totaled \$44.9 million.

During the year ended December 31, 2022, we made additional cash investments in Sayona Quebec totaling \$19.6 million as part of our 25% equity interest contribution for expenditures incurred by Sayona Quebec related to exploration and evaluation activities and NAL for restart activities.

Revenue and expenses of Sayona Quebec and Sayona Mining are not consolidated into our financial statements; rather, our proportionate share of the income or loss of each investee is reported as "Loss from equity method investments in unconsolidated affiliates" in our consolidated statements of operations.

Offtake Agreement

In January 2021, we entered into a long-term offtake agreement with Sayona Quebec. Under the terms of the offtake supply agreement, Sayona Quebec will supply Piedmont Lithium the greater of 113,000 metric tons per year or 50% of Sayona Quebec's spodumene concentrate production from the combination of NAL and the Authier project. Under the agreement, spodumene concentrate is priced on a market price basis with a floor price of \$500 per metric ton and a ceiling price of \$900 per metric ton.

Atlantic Lithium

We own an equity interest of approximately 9% in and have a strategic partnership with Atlantic Lithium. As of December 31, 2022, we have invested \$16.0 million in Atlantic Lithium.

Atlantic Lithium owns a 100% ownership in Atlantic Lithium Ghana, which owns the Ewoyaa project in Ghana, Africa. Atlantic Lithium Ghana is consolidated by Atlantic Lithium. Revenue and expenses of Atlantic Lithium are not consolidated into our financial statements; rather, our proportionate share of the income or loss of Atlantic Lithium is reported as "Loss from equity method investment in unconsolidated affiliates" in our consolidated statements of operations.

Offtake Agreement

On August 2021, we entered into a long-term offtake agreement for spodumene concentrate with Atlantic Lithium, whereby we can acquire a 50% equity interest in Atlantic Lithium Ghana, and the right to purchase 50% of Atlantic Lithium Ghana's life-of-mine production of spodumene concentrate by funding over time the exploration and evaluation activities (Phase 1) and development

activities (Phase 2) for the Ewoyaa project. We currently estimate our total funding requirement to be approximately \$98 million through late 2024 or 2025. Our funding requirement in the Ewoyaa project is split between two phases:

- Phase 1—We have the ability to acquire a 22.5% equity interest in Atlantic Lithium Ghana by funding our share of exploration, evaluation and technical study expenditures currently estimated to be \$19 million and, making the election to proceed with Phase 2. We have a cost sharing arrangement with Atlantic Lithium whereby we will pay all costs up to \$17.0 million. We will share equally with Atlantic Lithium and costs savings below \$17.0 million and any cost overruns above \$17.0 million. In the event we do not fully fund our required amount for Phase 1 and make the election to proceed with Phase 2, we will forfeit all cash advances paid to date and lose our ability to acquire a 22.5% equity interest in Atlantic Lithium Ghana.
- Phase 2—We have ability to acquire an additional 27.5% equity interest in Atlantic Lithium Ghana by funding our share of development expenditures, currently estimated to be \$98 million. We will share equally with Atlantic Lithium any cost savings below \$70.0 million and any cost overruns above \$70.0 million. In the event we do not fully fund our required amount for Phase 2, we will forfeit all cash advances paid to date for Phase 1 and Phase 2 and all equity interests in Atlantic Lithium Ghana.

As of December 31, 2022, cash payments to Atlantic Lithium for Phase 1 of the Ewoyaa project totaled \$17.0 million and are reported as "Non-current assets" in the consolidated balance sheets (See Note 5— *Other Assets*).

Pricing for the offtake supply of spodumene concentrate will be at market rates at the time of purchase. Under the offtake agreement, spodumene concentrate is priced on a CIF, China market price basis less ocean freight and insurance on a net back basis to free on-board vessel (Incoterms 2020) at the Port of Takoradi, Ghana.

Equity Method Investment Properties

The information provided below was derived from information publicly disclosed by each such investee company.

Quebec Properties

Sayona Quebec's assets are comprised of three wholly-owned projects as follows: NAL which is in the development stage, the Authier project ("Authier") which is in the development stage, and the Tansim project ("Tansim") which is in the exploration stage.



Figure 3

North American Lithium

NAL was acquired by Sayona Quebec in August 2021. NAL is comprised of 19 contiguous claims covering 1,438 acres and one mining lease covering approximately 1,729 acres. NAL is situated in La Corne township in Quebec's Abitibi region. The project is located approximately 20 miles from Authier near Val-d'Or, a major mining city in Quebec.

NAL is a brownfield open pit mining operation with a concentrator and a carbonate plant. Prior to acquisition by Sayona Quebec, more than CAD \$400 million was invested in NAL. NAL receives most of its power from hydroelectricity and is well serviced by provincial highways and an all-weather secondary road. Restart activities have commenced at NAL with the expectation of commencing spodumene concentrate production in the first half of 2023. NAL holds all of the material permits required to restart operations.

Authier

Authier is located approximately 28 miles northwest of the city of Val-d'Or. Val-d'Or is located approximately 290 miles northwest of the city of Montreal. Authier is easily accessible by a rural road network that is connected to a national highway a few miles east of the project site. The project area comprises 19 mineral claims totaling 1,613 acres and directionally extends 2 miles east-west and 2 miles north-south. The mineral claims are located over Crown Lands, which is land owned by the Province of Quebec.



Figure 4

The deposit is hosted in a spodumene-bearing pegmatite intrusion. The deposit is 2,707 feet long, striking east-west, with an average thickness of 82 feet, minimum 13 feet and maximum 180 feet, dipping at 40 degrees to the north. The current pit optimization has the mineralization extending down to 656 feet depth but the deposit remains open in all directions.

Authier has been subject to more than 19 miles of drilling. Between 2010 and 2012 Glen Eagle, the previous tenement holder, completed over 6 miles of diamond drilling in 69 diamond drill holes (“DDH”) of which 5 miles were drilled on the Authier deposit; 1,998 feet (five DDH) were drilled on the northwest and 1,385 feet on the south-southwest of the property. Sayona Quebec announced the completion of three phases of drilling totaling more than 6.5 miles in 81 DDH. All the holes completed by Sayona Quebec have used standard DDH diameter size, using a standard tube and bit.

Sayona Quebec continues to closely engage with all stakeholders concerning Authier’s development by, among other things, holding information sessions and consultations with local municipalities, landowners, First Nations communities, nongovernmental organizations and other stakeholders.

Sayona Quebec progressed a revised Environmental Impact Study (“EIS”) in accordance with Québec’s regulatory requirements. The EIS is a rigorous scientific study containing all the necessary documentation to satisfy the necessary legal and regulatory requirements. In January 2020, Sayona Quebec submitted the revised EIS to Québec’s Ministry of the Environment and the Fight against Climate Change (“MELCC”). The plan for NAL to process ore from Authier may impact the requirements for approvals under the Quebec Bureau d’Audiences Publiques Sur l’Environnement (“BAPE”) process. Regardless, Sayona Quebec will continue the development of the Authier project under strict guidelines to minimize impacts on the environment, including reducing wind and water erosion, promoting revegetation and optimizing water management practices.

Tansim

Tansim is situated 51 miles south-west of Authier. Tansim comprises 355 mineral claims spanning 50,749 acres and is prospective for lithium, tantalum, and beryllium.

Mineralization is hosted within spodumene-bearing pegmatite intrusions striking east-west, dipping to the north, and hosted by metasedimentary – metavolcanic rocks of the Pontiac sub-province. The main prospects are Viau-Dallaire, Viau and Vezina. The potential quantity and grade of the exploration target is uncertain as there has been insufficient exploration to estimate a mineral resource, and it is uncertain if further exploration will result in the estimation of a mineral resource.

Northern Hub Properties

Sayona Mining's Northern Hub assets include the jointly-owned Moblan project ("Moblan") and wholly-owned Lac Albert project ("Lac Albert"), in which we have an equity interest through our approximate 14% ownership in Sayona Mining, as noted above.

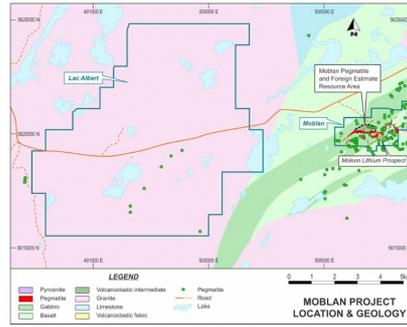


Figure 5

Moblan

Moblan is jointly-owned by through a 60% equity interest by Sayona Mining and a 40% equity interest by SOQUEM Inc, a wholly-owned subsidiary of Investissement Québec. Moblan is in the development stage, and is located in the Eeyou-Istchee James Bay region of northern Québec, a proven lithium mining province that hosts established, world-class lithium resources, including Nemaska Lithium's Whabouchi Mine. The area is well serviced by key infrastructure and transport and has access to low-cost, environmentally friendly hydropower.

Moblan is host to high-grade spodumene mineralization in a well-studied proven deposit with more than 10 miles of diamond drilling. The project covers approximately 1,070 acres for a total of 20 claims. In January 2022, Sayona Mining announced the opportunity to expand the mineralization outside the existing proven resource envelope and the commencement of a major drilling program at the project in partnership with SOQUEM. In April 2022, Sayona Mining announced the discovery of a significant new southern lithium pegmatite zone, the Moblan South Discovery. The following month Sayona Mining announced the discovery of multiple new mineralized lithium pegmatites at Moblan South, South East Extension, Moleon and extensions to the Main Moblan lithium deposit. As of October 2022, Sayona Mining had completed approximately 17 miles of drilling at the project.

In October 2022, Sayona Mining launched a pre-feasibility study ("PFS") for Moblan, targeting the development of a lithium mine and a concentrator. The PFS will be conducted by InnovExplo, a Quebec company, with a target completion date in May 2023, followed by a definitive feasibility study expected by September 2023.

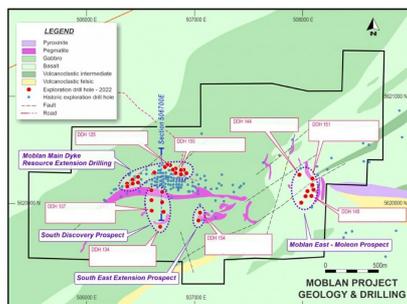


Figure 6

Lac Albert

In January 2022, Sayona Mining announced the acquisition of 121 new claims in the vicinity of Moblan known as Lac Albert, which is in the exploration stage. Located 2 miles west of the Moblan project and within the same proven lithium mining province, the new claims span 16,282 acres.

Past work has been limited and the geology of the new claim area at Lac Albert is poorly understood. Glacial moraines obscure a significant portion of the area. In May 2022, a till and soil sampling program was undertaken at Lac Albert and mapping of outcrops and boulders was completed. The identified pegmatite occurrences are located in an area with favorable access and proximity to the Route Du Nord, an all-weather regional highway. The area of the new claims is displayed in Figure 6 above.

Western Australia Properties

We have an equity interest of approximately 14% in Sayona Mining’s Western Australian exploration stage properties via our equity stake in Sayona Mining as noted above.

Sayona Mining owns a 100% economic interest in certain properties in Western Australia. Sayona Mining’s leases in Western Australia cover 264,895 acres and comprise lithium, gold and graphite tenure in the Pilbara, Yilgarn and East Kimberley regions. All of Sayona Mining’s Western Australia projects are in the exploration stage.

The Pilbara projects comprise 12 lithium leases totaling 230,548 acres in the Pilgangoora lithium district of Western Australia, with 10 of the tenements also having associated gold rights. These are proximal to the De Grey Mining’s Mallina Gold project, which includes the Hemi gold discovery.

Of the 12 Pilbara tenements with lithium rights, nine are subject to an earn-in agreement, whereby Morella Corporation Limited ("Morella"), listed on the Australian stock exchange and previously known as Altura Mining, is carrying out exploration to earn an equity interest. The three remaining tenements are held within Sayona Mining's wholly-owned lithium exploration portfolio.

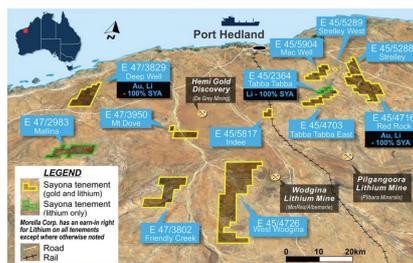


Figure 7

Pilbara Lithium Tenements

In 2021, Morella commenced an earn-in agreement with Sayona Mining covering eight tenements including the Mallina, Tabba East, and Strelley areas, all in the Pilgangoora lithium district, and two tenements in the South Murchison. Morella is required to fund AUD \$1.5 million for exploration activities within three years to earn a 51% equity interest.

Mallina Project (E47/2983)—The Mallina Project is the most advanced of Sayona Mining's Pilbara portfolio. Multiple zones of spodumene pegmatites have been identified within a 6,178 acre zone. The pegmatites occur in three main swarms: the western Discovery prospect, the central Area C prospect and the Eastern Group pegmatites. Mapping has confirmed the pegmatites can be extensive, with the Eastern No.2 pegmatite being over 4,265 feet in strike extent and up to 66 feet in thickness.

During Sayona Mining's fiscal year ended June 30, 2022, Morella reported significant progress at the Mallina Project with the completion of a targeted deep drilling program. In total, three reverse circulation ("RC") holes for 1,411 feet and four diamond core holes, including two core tail extensions to RC drilling, were completed for 2,728 feet. Fine grained spodumene quartz intergrowths within aplite intrusive intervals were observed in the drill core. RC chips and drill core were logged on site and samples have been prepared for mineralogical studies and geochemical assay work to be completed at a laboratory in Perth, Australia. Results are pending.

Mt. Edon Project (E59/2092)—The Mt. Edon Project is located in the South Murchison covers the southern portion of the Payne's Find greenstone belt and hosts an extensive swarm of pegmatites. During Sayona Mining's fiscal year ended June 30, 2022, Morella commenced exploration activities, mapping a total of 53 pegmatite outcrops. Rock chip assay results indicate the potential of the area for lithium mineralization.

Pilbara Gold Tenements

Sayona Mining’s Pilbara gold leases are prospective for intrusion related gold mineralization, similar in style to that identified at the Hemi gold discovery. This style of mineralization is hosted within altered late stage high-magnesium diorites. Sayona Mining’s tenement portfolio remains effectively untested for its gold potential with large areas masked by superficial cover.

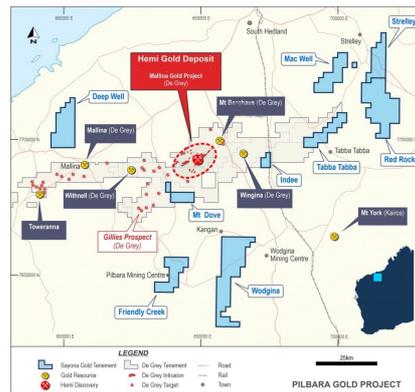


Figure 8

Mount Dove Project (E47/3950)—The Mt. Dove project is within 3 miles of De Grey’s greater Hemi project area, a 19-mile trend which includes Hemi and adjacent intrusions. During the year, airborne magnetic surveys and geological mapping were undertaken which identified magnetic features for drill testing.

Sayona Pilbara Lithium Exploration

Sayona Mining holds the lithium rights at the Deep Well, Tabba Tabba, and Red Rock tenements which cover a total of 82,533 acres.

Deep Well Project (E47/3829)—The Deep Well project covers an area of 29,405 acres to the west of Port Hedland. Interpretation of new high resolution geophysical data, covering the entire lease area, has identified 11 discrete magnetic anomalies. A 60-hole air-core drilling program, completed a total of 60 DDH for 5,502 feet. Drill samples have been submitted for gold, lithium and multi-element analysis. Results are pending. Drilling targeted magnetic features that display similarities to the Hemi style of intrusion-related gold mineralization. The T1, T2, T3, T7, T12a and T12b targets were tested. Planning for follow up reverse circulation drilling is underway.

Tabba Tabba Project (E45/2364)—The Tabba Tabba project is located north of the Pilgangoora lithium mining area in a region of historic tin and tantalum mining. It comprises six tenements covering 145,297 acres, located 25 miles to the north of the Pilgangoora lithium mining area. The main Tabba Tabba tenement, E45/2364 (lithium rights only), is centered in an area of historic tin and tantalum mining. Spodumene pegmatite has been identified in adjacent tenure and the Tabba Tabba project provides exposure to the area’s emerging lithium prospectivity. Soil geochemistry and geological mapping has identified pegmatite and geochemical anomalies and planning for drill testing of these features in the 2022 season are advanced.

Red Rock Project. (E45/4716)—During Sayona Mining’s fiscal year ended June 30, 2022, a geological and regolith terrain mapping study was undertaken over the tenements area, identifying a north-east trending structural corridor extending from Pilgangoora in the south. As a first pass test for lithium and gold mineralization, a soil geochemical sampling program was completed over a 6 mile extent to this target zone. Once results are returned they will be assessed for potential targets for drill testing.

Kimberley Graphite Project

Past exploration by Sayona Mining has identified graphite mineralization within an 16 mile strike extent of the Corkwood geochemical and geophysical anomaly. The target is structurally deformed, higher grade graphite portions of the stratigraphy with the potential to host coarse flake, high purity graphite mineralization.

Sayona Mining is planning further drill testing of the mineralization to obtain samples for metallurgical and beneficiation testwork.

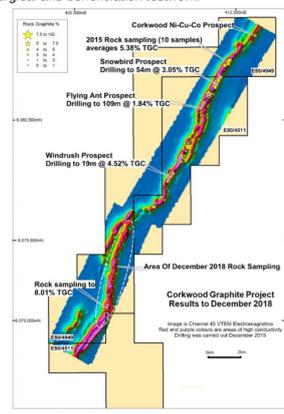


Figure 9

Ghana

Ewoyaa

Ewoyaa is an exploration stage project for the mining, development and production of spodumene concentrate located on the south coast of Ghana and covers an area of approximately 348 square miles. As noted above, we can acquire an equity interest of 50% in Ewoyaa via Atlantic Lithium Ghana through future staged investments.

Ewoyaa includes the Ewoyaa, Abonko, and Kaampakrom deposits, and is located in Ghana, West Africa, approximately 62 miles southwest of the capital of Accra. The project area is immediately north of Saltpond, in the Central Region, and falls within the Mfantseman Municipality where Saltpond is the district capital. See Figure 10 below.

Access to the site from Accra is along the asphalt N1 Accra-Cape Coast-Takoradi Highway which runs along the southern coastal boundary of the project. Several laterite roads extend northwards from the highway and link communities in the project area. The deep-sea Port of Takoradi is within 68 miles west of the Ewoyaa site and accessible via the same highway. See Figure 10 below.

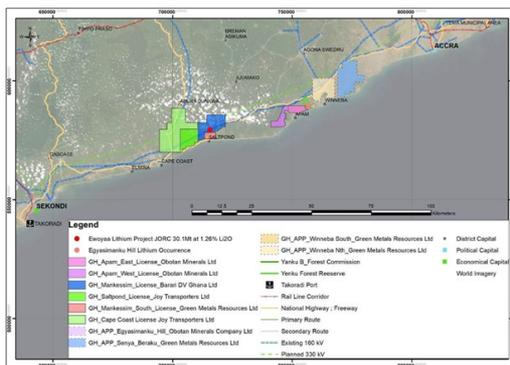


Figure 10: Ewoyaa location and tenure, showing proximity to Takoradi Port, highway and grid power.

The topography of the project varies with steep hills surrounding low-lying valleys throughout the proposed mining area. The terrain of the project area rises sharply from a narrow coastal plane to an undulating peneplane where elevation ranges from 66 feet to 394 feet above mean sea level.

Ghana is a republic within the Commonwealth. Ghana gained independence from colonial Britain in 1957, being the first sub-Saharan African country in colonial Africa to do so. Despite some turbulent history in the first decades following independence, Ghana has emerged since the 1990s as a stable, multi-party democracy.



Figure 11: High voltage power transmission lines, bitumen highway and deep-sea Takoradi port close to project site.

Ewoyaa covers two contiguous exploration licenses, the Mankessim (RL 3/55) and Mankessim South (RL PL3/109) licenses. The Mankessim is a joint-venture, with the license in the name of the joint-venture party, Barari DV Ghana; document number 0853652-18. The Mineral Prospecting License was renewed on July 27, 2021 for a further three-year period valid through July 26, 2024. Mankessim South is a wholly-owned subsidiary of Green Metals Resources. A Mineral Prospecting License was renewed on February 19, 2020 for a further three-year period through February 18, 2023. The tenement is in good standing with no known impediments. Ewoyaa is the subject of a mining lease application submitted to the Minerals Commission of Ghana and announced by Atlantic Lithium on October 13, 2022.

Item 3. LEGAL PROCEEDINGS.

Information regarding legal proceedings is contained in Note 14—*Commitments and Contingencies* of the consolidated financial statements contained in this Annual Report and is incorporated herein by reference.

Item 4. MINE SAFETY DISCLOSURES.

Not applicable because we do not currently operate any mines subject to the U.S. Federal Mine Safety and Health Act of 1977.

Part II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

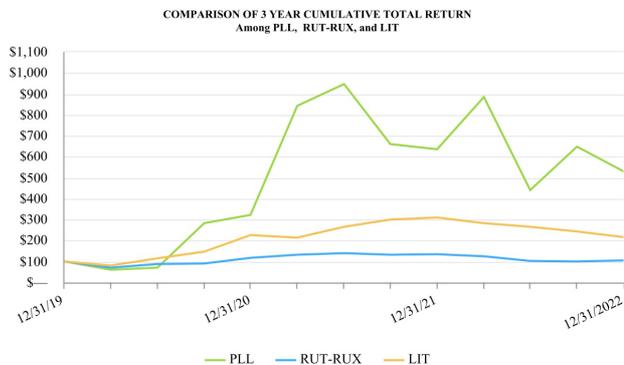
Market Information

Our common stock is traded on The Nasdaq Capital Market under the symbol "PLL," and our CDIs are listed on the ASX also under the symbol "PLL."

Based on information known to us, as of February 24, 2023, we had outstanding 19,182,063 shares of our common stock held by 9 stockholders of record in the U.S. Of such shares 3,978,919 were held in Australia in the form of CDIs.

Stock Performance Graph

The following graph depicts the total return to shareholders of PLL for the last three years to the performance of the Russell 2000 ("RUT-RUX") and the Global X Lithium & Battery Tech ETF ("LIT"). The graph assumes an investment of \$100 in our common stock and each index on December 31, 2019. The stock performance shown in the graph is not necessarily indicative of future price performance.



Equity Compensation Plans

See Part III, Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters" for the information required by Item 201(d) of S-K 1300 regarding equity compensation plans.

Dividends

We have not declared any dividends during the year ended December 31, 2022, the six months ended December 31, 2021, or years ended June 30, 2021 or 2020, and we do not anticipate that we will do so in the foreseeable future. We currently intend to retain future earnings, if any, to finance the development of our business. Dividends, if any, on outstanding shares of our common stock will be declared by and subject to the discretion of the Board on the basis of our earnings, financial requirements, and other relevant factors.

Item 6. [Reserved].

Not applicable.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and related notes included elsewhere in our Annual Report. The following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in our Annual Report particularly those in the sections entitled "Risk Factors," "Cautionary Note Regarding Forward-Looking Statements," and "Cautionary Note Regarding Disclosure of Mineral Properties."

This management's discussion and analysis is a supplement to our financial statements, including notes, referenced elsewhere in our Annual Report and is provided to enhance your understanding of our operations and financial condition. This discussion is presented in millions, and due to rounding, may not sum or calculate precisely to the totals and percentages provided in the tables.

Cautionary Note to Investors

In the U.S., we are governed by the Exchange Act, including Regulation S-K 1300 thereunder. Sayona Mining and Atlantic Lithium, however, are not governed by the Exchange Act and from time-to-time report estimates of "measured," "indicated," and "inferred" mineral resources as such terms are used in the JORC Code. In March 2022, our partner, Atlantic Lithium, published a JORC Code mineral resource estimate update for Ewoyaa. Also in March 2022, our partner, Sayona Mining, published a JORC Code mineral resource estimate update for Authier and NAL. Although S-K 1300 and the JORC Code have similar goals in terms of conveying an appropriate level of confidence in the disclosures being reported, they at times embody different approaches or definitions. Consequently, investors are cautioned that public disclosures by Sayona Mining, Atlantic Lithium, or us of measures prepared in accordance with the JORC Code may not be comparable to similar information made public by companies subject to S-K 1300 and the other reporting and disclosure requirements under the U.S. federal securities laws and the rules and regulations thereunder.

Executive Overview & Strategy

Piedmont Lithium is a U.S. development stage company whose aim is to become one of the leading producers of lithium hydroxide in North America. As the world, the American government, and industries mobilize to support global decarbonization through the electrification of transportation, we are poised to become a critical contributor to the U.S. electric vehicle and battery manufacturing supply chains.

Since 2021, electric vehicle and battery companies have announced commitments to new or expanded manufacturing operations across the U.S., which exponentially and rapidly drove the domestic demand for lithium over the next decade, far beyond current or projected capacity. Piedmont Lithium, as a U.S. based company, is well positioned to benefit from federal policies and funding established to facilitate the expedited development of the domestic supply chain and clean energy economy, while strengthening national energy security. A challenge faced by the industry is that while manufacturing facilities for electric vehicles, batteries, and related components typically can be constructed in 2-3 years, the development of lithium resources, from exploration to production is often a much longer time-frame. We believe that time, specifically this development timeline disparity, is the greatest risk to the emerging electrification industry.

We have spent the past six years developing a portfolio of four projects, including wholly-owned Tennessee Lithium and Carolina Lithium, and strategic investments in Quebec with Sayona Mining and Sayona Quebec, and in Ghana with Atlantic Lithium, to support growing U.S. lithium demand. Our strategic investments in Sayona Mining and Sayona Quebec offer the potential for near-term supply of spodumene concentrate to the market with first shipments from NAL expected in the second half of 2023. Our investment in Ewoyaa in Ghana is expected to produce spodumene concentrate by the end of 2024 or the first half of 2025 and we anticipate that this will serve as the primary feedstock for Tennessee Lithium. Our operation in Tennessee is being designed to produce 30,000 metric tons of lithium hydroxide annually with planned production commencing in either later 2025 or the first half of 2026. Carolina Lithium is located within a world-class, historic lithium resource in North Carolina. This integrated spodumene-to-hydroxide project is being developed to produce 30,000 metric tons of lithium hydroxide commencing in late 2026 or in the first half of 2027. Altogether, Piedmont Lithium is currently positioned to produce an estimated 60,000 metric tons of lithium hydroxide annually, which would be significantly accretive to today's total estimated U.S. annual production capacity of just 15,000 metric tons.

The Company's lithium hydroxide capacity and revenue generation is expected to be supported by production and offtake rights of approximately 500,000 metric tons of spodumene concentrate.

Our projects and strategic investments are being developed on a measured timeline to provide the potential for near-term cash flow and long-term value maximization as we continue to evaluate opportunities to further expand our resource base and production capacity. The timelines described above are subject to obtaining permits, approvals, and funding.

As we continue to advance our goal of becoming one of the leading producers of lithium resources in North America, we expect to capitalize on our competitive strengths, including the potential for significant near-term offtake and revenue generation, scale and diversification of lithium resources, advantageous locations of projects and assets, access to a variety of potential funding options, opportunities to leverage our greenfield projects, and a highly experienced management team. Advancements that have been made in this effort are highlighted below.

Highlights of Corporate and Project Advancements

Corporate

We continue to engage in activities to strengthen our financial position and business strategy, including support for the development and expansion of our portfolio of projects, strategic investments, and corporate operations.

Recent highlights include:

- In February 2023, we received \$75 million from LG Chem as a part of their strategic investment in Piedmont Lithium. In exchange LG Chem received 1,096,535 newly issued shares of Piedmont Lithium's common stock at an approximate price of \$68.40 per share. Upon closing, LG Chem owned approximately 5.7% of Piedmont Lithium's common shares.
- In March 2022, we raised \$122.1 million in net proceeds through the issuance of 2,012,500 shares of common stock under our shelf registration statement primarily for purposes of supporting continued growth of our corporate structure, and advancing each of our projects and strategic investments including:
 - Sayona Quebec's restart of NAL in Quebec, Canada;
 - Atlantic Lithium's continued progress towards the completion of a definitive feasibility study and final investment decision for Ewoyaa;
 - Tennessee Lithium's continued FEED and permitting activities; and
 - Land acquisitions, permitting activities, and local approvals for Carolina Lithium.

Quebec

We own an equity interest of approximately 14% in Sayona Mining and are a 25% equity partner in Sayona Quebec with the remaining 75% equity interest owned by Sayona Mining. Sayona Quebec owns a portfolio of projects, which include NAL, Authier, and Tansim. We hold an offtake agreement with Sayona Quebec for the greater of 113,000 metric tons per year of SC6 or 50% of production from NAL purchased at a price ceiling of \$900 per metric ton. First shipments are targeted for the second half of 2023. We believe opportunity exists for our investments in Quebec to generate revenue in 2023 through production and offtake of spodumene concentrate to LG Chem and Tesla.

Recent highlights include:

- In February 2023, we entered into a spodumene concentrate offtake agreement with LG Chem, which commits us to sell 200,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement expires four years from the date of first shipment which is expected to occur in the third quarter of 2023 with final shipment expected in the third quarter of 2027. Pricing for the agreement is determined by a market-based mechanism.
- In January 2023, we entered into an amended offtake agreement with Tesla to provide spodumene concentrate from NAL in Quebec. The agreement commits us to sell 125,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The three-year agreement commences in the second half of 2023 and can be extended for an additional three years upon mutual agreement. Pricing for the agreement is determined by a market-based mechanism.

- In December 2022, NAL received the final material permit required to restart operations, paving the way for an expected restart in the first half of 2023. The restart project is entirely funded from pro-rata cash contributions by Sayona Mining and Piedmont Lithium, with each party having completed significant capital raises in the first half of 2022.
- In June 2022, Piedmont Lithium and Sayona Mining formalized restart plans for NAL in Quebec, including approximately \$80 million in operational upgrades aimed at improving product quality and plant utilization. Long-lead equipment was ordered, and detailed design engineering commenced in late 2021 based on our jointly planned timeline.
- In May 2022, our partner, Sayona Mining, published a pre-feasibility study for the restart of spodumene concentrate operations for NAL.
- In February 2022, we completed a preliminary economic assessment for a proposed merchant lithium hydroxide conversion plant (Tennessee Lithium) to expand our planned manufacturing capacity in the U.S. to 60,000 metric tons of lithium hydroxide per year. The results of our preliminary economic assessment demonstrate the potential for us to expand our lithium hydroxide manufacturing business from our existing spodumene concentrate offtake agreement with Atlantic Lithium and Sayona Quebec as well as from market sources.

Ghana

We own an equity interest of approximately 9% in Atlantic Lithium and we are earning a 50% equity interest in Atlantic Lithium's Ghana's spodumene projects in Ghana, West Africa, which includes Ewoyaa, their flagship project located approximately 70 miles from the Port of Takoradi. We hold an offtake agreement with Atlantic Lithium for 50% of annual production of spodumene concentrate at market prices on a life-of-mine basis from Ewoyaa. Atlantic Lithium is expected to produce a definitive feasibility study in the first half of 2023. As part of our strategy, we expect to transport our 50% offtake of spodumene concentrate from Ewoyaa to the U.S. to serve as the primary feedstock lithium hydroxide conversion at Tennessee Lithium.

Recent highlights include:

- In October 2022, Atlantic Lithium announced it had submitted the mining lease application for Ewoyaa to the Minerals Commission of Ghana. We expect construction of the mine and concentrator to begin in 2023 and production of spodumene concentrate to begin in late 2024 or the first half of 2025, subject to receipt of the mining lease, approval of environmental studies, and other statutory requirements.
- In September 2022, Atlantic Lithium announced the successful completion of a prefeasibility study for Ewoyaa, demonstrating spodumene concentrate production using dense medium processing technology.

Tennessee Lithium

Tennessee Lithium is being designed as a world-class lithium hydroxide facility in America's emerging "Battery Belt" and is expected to add 30,000 metric tons per year of lithium hydroxide production capacity to the U.S. supply chain.

Recent highlights include:

- In October 2022, Piedmont Lithium was selected for a \$141.7 million grant from the DOE to expand domestic manufacturing of batteries for electric vehicles and the electrical grid and for materials and components currently imported from other countries. The funding is tied specifically to the construction of Tennessee Lithium.
- In October 2022, we submitted our construction and operating conditional major Non-Title V Air Permit application for Tennessee Lithium to the Tennessee Department of Environment and Conservation ("TDEC"). The TDEC Air Pollution Control Division notified us in February 2023 that our application had been deemed complete.
- In September 2022, we selected Etowah, Tennessee in McMinn County as the location for our lithium hydroxide merchant plant (Tennessee Lithium). Also in September 2022, we awarded Tennessee Lithium's FEED contract to Kiewit, a leading U.S. based EPC firm. Kiewit is supported by Primero, an EPC firm specialized in lithium projects. We expect FEED, which commenced shortly after the contract award, to be completed in the first half of 2023. Permit applications for Tennessee Lithium are progressing, and subject to receipt of all material required permits as well as the completion of FEED and project financing, we expect to sign an EPC contract for the construction of Tennessee Lithium. Contingent upon the timely receipt and completion of items discussed above, we expect to begin construction in 2023 with first production of lithium hydroxide targeted in late 2025 or the first half of 2026.

Carolina Lithium

Carolina Lithium is located within a world-class resource in the Carolina Tin-Spodumene Belt and is being designed as a fully integrated project with mining, spodumene concentrate production, and lithium hydroxide conversion on a single site in Gaston County, North Carolina. Carolina Lithium is expected to produce 30,000 metric tons per year of lithium hydroxide. We are currently engaged in permitting activities with state and local representatives and our goal is to obtain the necessary permits in 2023, with rezoning to follow receipt of a mine permit, commence construction following rezoning and necessary local approvals, and begin production of lithium hydroxide in late 2026 or the first half of 2027.

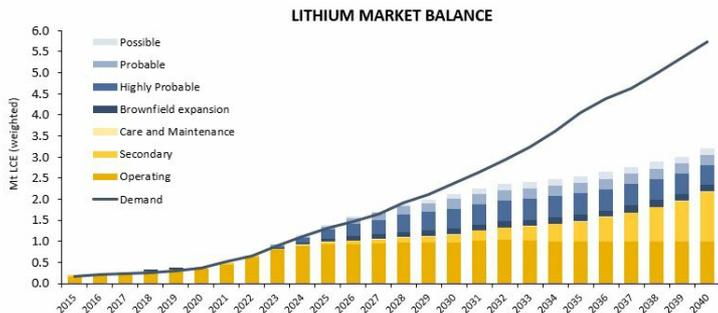
Recent highlights include:

- We submitted our mining permit application to the NCDEQ DEMLR in August 2021. In January 2022, DEMLR requested additional information from the Company in connection with our mining permit application. We have received an extension of time request until May 2023 to allow Long Creek Wastewater Treatment Facility the necessary time to complete their background study regarding proposed treatment of water flow from Carolina Lithium.
- A Prevention of Significant Deterioration–Title V Air Permit application has been submitted to the NCDEQ Division of Air Quality and was deemed complete in February 2023.
- We continue to engage with neighbors, community members, leaders, and organizations to communicate with them about the proposed project and to support the communities in which we live, work, and play. We have contributed approximately \$300,000 since 2020 and have contributed extensive volunteer time to Gaston County local organizations and non-profits.

Market Outlook

The demand for electric vehicles continues to accelerate as many jurisdictions around the world have legislated to shifting new car fleets away from internal combustion engines and toward electric vehicles. These electric vehicles will use batteries, nearly all of which are expected to be lithium-based batteries. Our strategy is to develop resources and processing capabilities that support the opportunity to meet the demands of our customers across the electric vehicle supply chain. Car manufacturers have committed significant capital investments totaling more than \$1 trillion across the electric vehicle supply chain to electrify their fleets by 2030. Many of the major car manufacturers have plans to build facilities in the U.S. to produce both lithium-ion batteries and electric vehicles that will require a supply of lithium products.

Lithium products are expected to be in a supply deficit in the coming years due to the projected adaption to electric vehicles as presented in the graph below:



Source: Benchmark Mineral Intelligence Q4 Forecast - January 2023.

The outlook for global sales of new electric vehicles (units in millions) and the global penetration rate of new electric vehicles sold compared to total new vehicles sold are presented in the table below:

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Sales of new electric vehicles	14.4	18.5	22.5	26.4	30.3	34.4	39.0	44.1	48.5	52.6
Penetration rate	17%	20%	23%	26%	29%	33%	36%	40%	43%	47%

Source: Rho Motion Electric Vehicle Battery Outlook as of January 2023.

Note: Periods in the tables above are calendar year periods.

COVID-19 Response

To protect the health and safety of our employees, contractors, visitors and communities, we implemented a comprehensive plan in response to the COVID-19 pandemic. Our plan included policies and protocols governing issues such as close contact exposure and contraction of COVID-19 and other communicable diseases, providing employees with additional personal protective equipment, and allowing our employees to work remotely. We have provided paid time off for employees impacted by COVID-19, reimbursed employees for costs associated with COVID-19 testing, provided time for employees to get vaccinated, and encouraged flexible work schedules to accommodate personal and family needs. While the outbreak recently appeared to be trending downward, particularly as vaccination rates increased, new variants of COVID-19 continue emerging, including the Omicron variants, spreading throughout the U.S. and globally and causing significant disruptions. While our business has not been materially impacted, the global economy, and our markets have been, and may continue to be, materially and adversely affected by COVID-19. Though availability of vaccines and reopening of state and local economies has improved the outlook for recovery from COVID-19's impacts, the impact of new, more contagious or lethal variants that may emerge, and the effectiveness of COVID-19 vaccines against variants and the related responses by governments, including reinstated government-imposed lockdowns or other measures, cannot be predicted at this time. Both the health and economic aspects of the COVID-19 pandemic remain highly fluid and the future course of each is uncertain. We cannot foresee whether the outbreak of COVID-19 will be effectively contained on a sustained basis, nor can we predict the severity and duration of its impact. If the impact of COVID-19 is not effectively and timely controlled on a sustained basis going forward, our business operations and financial condition may be materially and adversely affected by factors that we cannot foresee. Any of these factors and other factors beyond our control could have an adverse effect on the overall business environment, cause uncertainties in the regions where we conduct business, cause our business to suffer in ways that we cannot predict and materially and adversely impact our business, financial condition and results of operations. We will continue to monitor guidelines and recommendations from the U.S. Center for Disease Control and Prevention and the World Health Organization as well as from local, state and federal governments.

Change in Fiscal Year End

Effective January 1, 2022, we changed our fiscal year end from June 30 to December 31. The six-month period from July 1, 2021 to December 31, 2021 served as a transition period. Our fiscal year 2022 commenced on January 1, 2022 and ended on December 31, 2022.

Components of our Results of Operations

Exploration and Mine Development Costs

We incur costs in resource exploration, evaluation and development during the different phases of our resource development projects. Exploration costs incurred before the declaration of proven and probable mineral reserves, which primarily include exploration, drilling, engineering, metallurgical test-work, site-specific reclamation, and compensation for employees associated with exploration activities, are expensed as incurred. We have also expensed as incurred engineering costs attributable to the evaluation of land for our future concentrator and chemical plants, development project management costs, feasibility studies and other project expenses that do not qualify for capitalization. After proven and probable mineral reserves are declared, exploration and mine development costs necessary to bring the property to commercial capacity or increase the capacity or useful life will be capitalized.

General and Administrative Expenses

General and administrative expenses relate to overhead costs, such as employee compensation and benefits for corporate management and office staff including accounting, legal, human resources and other support personnel, professional service fees, insurance, and

costs associated with maintaining our corporate headquarters. Included in employee compensation costs are cash and stock-based compensation expenses.

Loss from Equity Investments in Unconsolidated Affiliates

Loss from equity investments in unconsolidated affiliates reflects our proportionate share of the net loss resulting from our investments in Sayona Mining, Sayona Quebec, and Atlantic Lithium. These investments are recorded under the equity method and adjusted each period, on a one-quarter lag, for our share of each investee's loss. Our equity method investments are an integral and integrated part of our ongoing operations. We have determined this justifies a more meaningful and transparent presentation of our proportional share of income in our equity method investments as a component of our loss from operations. In the third quarter of 2022, we reclassified our share of loss in equity method investments to operating income for all periods presented. See Note 4—*Equity Investments in Unconsolidated Affiliates* for further discussion.

Other Income (Expense)

Other income (expense) consists of interest income (expense), foreign currency exchange gain (loss), and gain on dilution of equity method investments in unconsolidated affiliates. Interest income consists of interest earned on our cash and cash equivalents. Interest expense consists of interest incurred on long-term debt related to noncash acquisitions of mining interests financed by the seller as well as interest incurred for lease liabilities. Foreign currency exchange gain (loss) relates to our foreign bank accounts and marketable securities denominated in Australian dollars. Gain on dilution of equity method investments in unconsolidated affiliates relates to our reduction in ownership of Sayona Mining and Atlantic Lithium due to their issuance of additional shares through public offerings and employee stock compensation grants.

Results of Operations

The unaudited information for the twelve-months ended December 31, 2021 in the table below has been derived by calculating the six months ended June 30, 2021 derived from our audited consolidated financial statements previously filed on Form 10-K and adding financial information to the audited consolidated financial statements previously filed on Form 10-KT for the six-month transition period ended December 31, 2021.

Twelve Months Ended December 31, 2022 Compared to Twelve Months Ended December 31, 2021

	Twelve Months Ended December 31,			
	2022	2021 (unaudited)	\$ Change	% Change
Exploration and mine development costs	\$ 1,939,498	\$ 16,931,139	\$ (14,991,641)	(88.5)%
General and administrative expenses	29,448,567	17,643,436	11,805,131	66.9%
Total operating expenses	31,388,065	34,574,575	(3,186,510)	(9.2)%
Loss from equity investments in unconsolidated affiliates	(8,352,290)	(706,761)	(7,645,529)	*
Loss from operations	(39,740,355)	(35,281,336)	(4,459,019)	12.6%
Other income (expense)	29,904,945	(276,029)	30,180,974	*
Tax expense	3,139,264	—	3,139,264	100.0%
Net loss	\$ (12,974,674)	\$ (35,557,365)	\$ 22,582,691	(63.5%)

* Not meaningful.

Exploration and Mine Development Costs

Carolina Lithium entered the development stage in December 2021. As such, direct costs incurred in the twelve months ended December 31, 2022 were capitalized and recorded to "Property, plant, and mine development, net" in our consolidated balance sheets. Direct costs incurred in the twelve months ended December 31, 2021 related to costs incurred prior to the declaration of proven and probable mineral reserves, and as such, were recorded as expense to "Exploration and mine development costs" in our consolidated statements of operations.

Exploration and mine development costs decreased \$15.0 million, or 88.5%, to \$1.9 million in the twelve months ended December 31, 2022 compared to \$16.9 million in the twelve months ended December 31, 2021. The decrease was driven by the capitalization of direct costs totaling \$13.7 million in the twelve months ended December 31, 2022.

Excluding the impact of capitalizing direct costs of \$13.7 million noted above, costs decreased \$1.2 million, or 7.4%, to \$15.7 million in the twelve months ended December 31, 2022 compared to \$16.9 million in the twelve months ended December 31, 2021. The decrease in costs was primarily driven by a decline in drilling activities, partially offset by an increase in engineering and permitting activities and an increase in employee compensation expenses primarily related to additional headcount in the twelve months ended December 31, 2022 compared to the twelve months ended December 31, 2021.

General and Administrative Expenses

General and administrative expenses increased \$11.8 million, or 66.9%, to \$29.4 million in the twelve months ended December 31, 2022 compared to \$17.6 million in the twelve months ended December 31, 2021. The increase in general and administrative expenses was primarily due to increased professional fees, including legal and accounting services, consulting services, and insurance expense as we became subject to U.S. public company requirements as part of our Redomiciliation on May 17, 2021. Employee compensation costs also contributed to higher general and administrative expenses due to the hiring of additional management and support staff at our headquarters in Belmont, North Carolina. Stock-based compensation expense included in general and administrative expenses was \$3.3 million and \$1.9 million in the twelve months ended December 31, 2022 and 2021, respectively.

Loss from Equity Investments in Unconsolidated Affiliates

Loss from equity investments in unconsolidated affiliates was \$8.4 million in the twelve months ended December 31, 2022 compared to \$0.7 million in the twelve months ended December 31, 2021. The loss reflects our proportionate share of the net loss resulting from our investments in Sayona Mining, Sayona Quebec, and Atlantic Lithium. For purposes discussed above, we had only one quarter of loss from our equity investment in Atlantic Lithium and a half year of loss from our equity investment in Sayona Quebec in the twelve months ended December 31, 2021. See Note 4—*Equity Method Investments in Unconsolidated Affiliates* for further information regarding our equity method investments.

Other Income (Expense)

Other income increased \$30.2 million to other income of \$29.9 million in the twelve months ended December 31, 2022 compared to \$0.3 million of expense in the twelve months ended December 31, 2021. The increase was primarily due to our gain on dilution of equity method investments of \$29.0 million, primarily related to Sayona Mining, in the twelve months ended December 31, 2022 and to a lesser extent an increase in interest income of \$1.1 million in the twelve months ended December 31, 2022 compared to December 31, 2021.

Income Tax Expense

Income tax expense was \$3.1 million for the twelve months ended December 31, 2022 compared to \$0 in the twelve months ended December 31, 2021. The increase was primarily related to deferred tax expense of \$7.4 million associated with the gain on dilution of equity method investments of \$29.0 million in the twelve months ended December 31, 2022, partially offset by a \$3.9 million deferred tax benefit for a release in valuation allowance against certain deferred tax assets ("DTA") in the twelve months ended December 31, 2022. Taxable temporary difference in equity method investments provide a source of income for realizing deferred tax assets, causing the \$3.9 million deferred tax benefit for a release in valuation allowance against certain deferred tax assets in the twelve months ended December 31, 2022.

We recorded a valuation allowance against a material component of our DTA as of December 31, 2022, and December 31, 2021. We intend to continue maintaining a valuation allowance on our DTA until there is sufficient evidence to support the reversal of all or some portion of these allowances. However, given our anticipated future earnings, we believe that there is a reasonable possibility that within the next 12 months, sufficient positive evidence may become available to allow us to reach a conclusion that a significant portion of the valuation allowance will no longer be needed. Release of the valuation allowance would result in the recognition of certain DTA and a decrease to income tax expense for the period the release is recorded. However, the exact timing and amount of the valuation allowance release are subject to change on the basis of the level of profitability that we are able to actually achieve.

Six Months Ended December 31, 2021 and 2020

	Six Months Ended December 31,		\$ Change	% Change
	2021	2020 (unaudited)		
Exploration and mine development costs	\$ 9,628,803	\$ 3,572,166	\$ 6,056,637	169.6%
General and administrative expenses	10,956,005	2,174,023	8,781,982	404.0%
Total operating expenses	20,584,808	5,746,189	14,838,619	258.2%
Loss from equity investments in unconsolidated affiliates	(642,135)	—	(642,135)	*
Loss from operations	(21,226,943)	(5,746,189)	(15,480,754)	269.4%
Other expense	(121,412)	(38,649)	(82,763)	214.1%
Net loss	\$ (21,348,355)	\$ (5,784,838)	\$ (15,563,517)	269.0%

* Not meaningful.

Exploration and Mine Development Costs

Exploration and mine development costs increased \$6.1 million, or 169.6%, to \$9.6 million in the six months ended December 31, 2021 compared to \$3.6 million in the six months ended December 31, 2020. The increase in exploration and mine development costs was primarily due to an increase in engineering expenses and, to a lesser extent, permitting expenses, testing expenses, and employee compensation expenses related to additional headcount. Employee compensation expenses included stock-based compensation expense of \$0.7 million and \$0.1 million in the six months ended December 31, 2021 and 2020, respectively.

Partially offsetting the increase in exploration and mine development costs was a decrease in drilling expenses. Our drilling activities declined leading up to and following the completion of our mineral resource estimate in October 2021.

General and Administrative Expenses

General and administrative expenses increased \$8.8 million, or 404.0%, to \$11.0 million in the six months ended December 31, 2021 compared to \$2.2 million in the six months ended December 31, 2020. The increase in general and administrative expenses was primarily due to an increase in employee compensation expenses related to additional management and support headcount at our headquarters in Belmont, North Carolina, professional fees including legal and accounting services, consulting services, and insurance expense. Employee compensation expenses included stock-based compensation expense of \$1.3 million and \$0.2 million in the six months ended December 31, 2021 and 2020, respectively.

Other Expense

Other expense was \$0.1 million in the six months ended December 31, 2021 compared to less than \$0.1 million in the six months ended December 31, 2020. The slight increase in other expense was due to an increase in foreign currency exchange loss, partially offset by a decrease in interest expense.

Loss from Equity Investments in Unconsolidated Affiliates

Loss from equity investments in unconsolidated affiliates was \$0.6 million in the six months ended December 31, 2021 compared to \$0 in the six months ended December 31, 2020. The loss reflects our proportionate share of the net loss resulting from our investments in Sayona Mining, Sayona Quebec, and Atlantic Lithium. We did not have equity investments in unconsolidated affiliates in 2020.

Years Ended June 30, 2021 and 2020

	Years Ended June 30,		\$ Change	% Change
	2021	2020		
Exploration and mine development costs	\$ 10,874,502	\$ 3,125,784	\$ 7,748,718	247.9%
General and administrative expenses	8,861,454	3,440,161	5,421,293	157.6%
Total operating expenses	19,735,956	6,565,945	13,170,011	200.6%
Loss from equity investments in unconsolidated affiliates	(64,626)	—	(64,626)	*
Loss from operations	(19,800,582)	(6,565,945)	(13,234,637)	201.6%
Other income (expense)	(193,266)	686,793	(880,059)	(128.1)%
Net loss	\$ (19,993,848)	\$ (5,879,152)	\$ (14,114,696)	240.1%

* Not meaningful.

Exploration and Mine Development Costs

Exploration and mine development costs increased \$7.7 million, or 247.9%, to \$10.9 million in the year ended June 30, 2021 compared to \$3.1 million in the year ended June 30, 2020. The increase in exploration and mine development costs was primarily due to an increase in contract labor costs and consulting fees associated with increased drilling, engineering, and metallurgical testing activities for Carolina Lithium.

General and Administrative Expenses

General and administrative expenses increased \$5.4 million, or 157.6%, to \$8.9 million in the year ended June 30, 2021 compared to \$3.4 million in the year ended June 30, 2020. The increase in general and administrative expenses was primarily due to an increase in professional and consulting fees, including legal, accounting, recruiting and other professional costs associated with our Redomiciliation. Employee compensation expenses also contributed to higher general and administrative expenses due to the hiring of key management personnel and support staff at our headquarters in Belmont, North Carolina in 2021. Employee compensation expenses included stock-based compensation expense of \$0.8 million and \$0.3 million in the years ended June 30, 2021 and 2020, respectively.

Other Income (Expense)

Other income (expense) decreased \$0.9 million, or 128.1%, to a \$0.2 million expense in the year ended June 30, 2021 compared to \$0.7 million income in the year ended June 30, 2020. The decrease in other income (expense) was due to gains in foreign exchange, a decrease in interest income and an increase in interest expense.

Loss from Equity Investments in Unconsolidated Affiliates

Loss from equity investments in unconsolidated affiliates was \$0.1 million in the year ended June 30, 2021 compared to zero in the year ended June 30, 2020. The loss was generated from our investment in Sayona Mining. We did not have equity investments in unconsolidated affiliates in 2020.

Liquidity and Capital Resources

Overview

As of December 31, 2022, we had cash and cash equivalents of \$99.2 million compared to \$64.2 million as of December 31, 2021. As of December 31, 2022, our cash balances held in the U.S. totaled \$97.8 million, or 98.6%, and the remaining \$1.4 million, or 1.4%, of our cash balances were held in Australia. Our cash balances in Australia can be repatriated to the U.S. with inconsequential tax consequences.

Our predominant source of cash has been generated through equity financing from issuances of our common stock. Prior to 2022, we had entered into noncash seller financed debt agreements to acquire land for Carolina Lithium. Since our inception, we have not

generated revenues, and as such, have principally relied on equity financing to fund our operating and investing activities and to fund our debt payments.

Our primary uses of cash during the twelve months ended December 31, 2022 consisted of: (i) equity investments in Sayona Quebec mainly for the operational restart of NAL totaling \$19.6 million; (ii) purchases of real property and associated mining interests of \$16.8 million and exploration and development expenditures of \$6.2 million for Carolina Lithium; (iii) advances to Atlantic Lithium for exploration and evaluation activities related to Phase 1 of Ewoyaa totaling \$13.0 million; (iv) capital expenditures primarily related to engineering costs of \$1.8 million for Tennessee Lithium, and (v) working capital. As of December 31, 2022, we had working capital of \$88.4 million.

As of December 31, 2022, we had long-term debt of \$0.2 million, net of the current portion of \$0.4 million, related to seller financed debt, as discussed above.

In October 2022, Piedmont Lithium was selected for a \$141.7 million grant from the DOE Office of Manufacturing and Energy Supply Chains and the Office of Energy Efficiency and Renewable Energy under the Bipartisan Infrastructure Law —Battery Materials Processing and Battery Manufacturing to expand domestic manufacturing of batteries for electric vehicles and components currently imported from other countries. Funding from the grant is solely in support for the construction of Tennessee Lithium. The final details of the project grant are subject to negotiations. The grant will not be final until Piedmont Lithium and the DOE have agreed to the specific terms of the grant. Once the terms have been finalized, funding of the grant will remain subject to satisfaction of conditions set forth in those terms.

In March 2022, we issued 2,012,500 shares of our common stock at \$65.00 per share for \$130.8 million. We received cash proceeds of \$122.1 million, which is net of \$8.7 million in share issuance costs associated with the U.S. public offering under our shelf registration statement. As of December 31, 2022, we had \$369.2 million remaining under our shelf registration statement, which expires on September 24, 2024.

Liquidity Outlook

We expect our current cash balances to fund cash expenditures in 2023 primarily related to: (i) continued equity investments in Sayona Quebec primarily for the restart and working capital of NAL, (ii) continued cash advances to Atlantic Lithium for Ewoyaa, (iii) real property acquisition costs and engineering and permitting activities associated with Tennessee Lithium, (iv) real property and associated mineral rights acquisition costs and continued permitting, engineering and testing activities associated with Carolina Lithium, and (v) working capital requirements.

In February 2023, we received \$75.0 million from LG Chem in exchange for 1,096,535 newly issued shares of our common stock for approximately \$68.40 per share. Also in February 2023, we entered into an offtake agreement with LG Chem to sell 200,000 metric tons of spodumene concentrate from production at NAL over a four-year period. We believe there is an opportunity to generate revenue and cash collections from the offtake agreement beginning in the second half of 2023.

As of December 31, 2022, we had entered into land acquisition contracts in North Carolina totaling \$38.8 million, of which we expect to close and fund \$21.0 million in 2023, \$16.3 million in 2024, and \$1.5 million in 2025. These amounts do not include closing costs such as attorney's fees, taxes and commissions. We are not obligated to exercise our land option agreements, and we are able to cancel our land acquisition contracts, at our option and with de minimis cancellation costs, during the contract due diligence period. Certain land option agreements and land acquisition contracts become binding upon commencement of construction for Carolina Lithium.

We believe our current cash balances are sufficient to fund our cash requirements for at least the next 12 months. In the event costs were to exceed our planned expenditures, we will reduce or eliminate current and/or planned discretionary spending. If further reductions are required, we will reduce certain non-discretionary expenditures.

We have submitted loan applications to the Advanced Technology Vehicles Manufacturing Loan Program ("ATVM") of the Loan Programs Office of the DOE for potential funding of program eligible capital costs associated with a concentrator and lithium hydroxide conversion facilities for Carolina Lithium and a lithium hydroxide conversion facility for Tennessee Lithium. We cannot be certain that our loan applications will be approved or will have terms acceptable to us. Additionally, as a result of our \$141.7 million grant award from the DOE, our eligibility for an ATVM loan for Tennessee Lithium may be reduced or we may elect to stop pursuit of an ATVM loan for Tennessee Lithium.

Historically, we have been successful raising cash through equity financing; however, no assurances can be given that additional financing will be available in amounts sufficient to meet our needs or on terms that are acceptable to us. If we issue additional shares

of our common stock, it would result in dilution to our existing shareholders. There are many factors that could significantly impact our ability to raise funds through equity and debt financing as well as influence the timing of future cash flows. These factors include, but are not limited to, permitting and approvals for our projects, our ability to access capital markets, stock price volatility, commodity price volatility, uncertain economic conditions, and access to labor. See Part I, Item1A "Risk Factors." in this Form 10-K for the year ended December 31, 2022.

Cash Flows

The unaudited information for the twelve-months ended December 31, 2021 in the table below has been derived by calculating the six months ended June 30, 2021 derived from our audited consolidated financial statements previously filed on Form 10-K and adding financial information to the audited consolidated financial statements previously filed on Form 10-KT for the six month transition period ended December 31, 2021.

The following table is a condensed schedule of cash flows provided as part of the discussion of liquidity and capital resources:

	Twelve Months Ended December 31,	
	2022	2021 (unaudited)
Net cash used in operating activities	\$ (26,448,527)	\$ (30,397,618)
Net cash used in investing activities	(59,800,271)	(89,908,616)
Net cash provided by financing activities	121,250,778	113,614,223
Net increase in cash and cash equivalents	\$ 35,001,980	\$ (6,692,011)

Cash Flows from Operating Activities

Operating activities used \$26.4 million and \$30.4 million in the twelve months ended December 31, 2022 and 2021, respectively, resulting in an decrease in cash used in operating activities of \$3.9 million. The decrease was primarily due to changes in working capital totaling \$1.0 million, partially offset by a decrease in net loss of \$5.0 million after adjusting for noncash items, including gain on dilution, loss from equity method investments, stock compensation expense, and deferred taxes.

Cash Flows from Investing Activities

Investing activities used \$59.8 million and \$89.9 million in the twelve months ended December 31, 2022 and 2021, respectively, resulting in a decrease in cash used in investing activities of \$30.1 million. The decrease was mainly due to a decrease in investments in equity investments of \$38.9 million relating to: (1) Sayona Mining and Atlantic Lithium totaling \$17.3 million and \$16.0 million, respectively, related to reduction in purchases of common stock, and (2) Sayona Quebec totaling \$5.7 million, related to reductions in additional investments to fund the NAL restart. These decreases were partially offset by increases in cash advances to Atlantic Lithium totaling \$8.7 million, for exploration and evaluation activities related to Phase 1 of Ewoyaa.

Cash Flows from Financing Activities

Financing activities provided \$121.3 million and \$113.6 million in the twelve months ended December 31, 2022 and 2021, respectively, resulting in an increase in cash of \$7.6 million. The increase in cash from financing activities was mainly due to a \$7.5 million increase in net cash proceeds from issuances of our common stock and cash exercises of stock options in the twelve months ended December 31, 2022 compared to December 31, 2021. The increase in cash was partially offset by an increase in debt payments totaling \$0.2 million.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of December 31, 2022, that we believe will affect cash over the next five years and thereafter:

	Total	Less than 1 year	1–3 years	3–5 years	Thereafter
Contractual obligations					
Long-term debt obligations	\$ 588,612	\$ 425,187	\$ 163,425	\$ —	\$ —
Lease liabilities	1,807,322	249,060	520,760	552,475	485,027
	<u>\$ 2,395,934</u>	<u>\$ 674,247</u>	<u>\$ 684,185</u>	<u>\$ 552,475</u>	<u>\$ 485,027</u>

Although we have entered into certain offtake supply agreements, purchase obligations from our customers are defined as purchase agreements that are enforceable and legally binding and specify all significant terms, including quantity, price, and the approximate timing of the transaction. Our obligations to fulfill supply agreements do not meet these criteria and are therefore not reflected in the table above.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in the notes to our consolidated financial statements included elsewhere in our Annual Report, we believe that the following critical accounting policy is the most important to understanding and evaluating our reported financial results.

Stock-based Compensation

The Leadership and Compensation Committee generally grants stock-based awards in the first quarter of each year. The Leadership and Compensation Committee does not have any programs, plans, or practices of timing these awards in coordination with the release of material non-public information. We have never backdated, re-priced, or spring-loaded any of our stock-based awards.

Equity-settled, share-based payments are provided to officers, employees, consultants and other advisors. These share-based payments are measured at the fair value of the equity instrument at the grant date. Fair value of share options is determined using the Black-Scholes option pricing model, taking into account the terms and conditions upon which the instruments were granted, and are disclosed in Note 9—*Stock Based Compensation*, to the audited consolidated financial statements appearing elsewhere in our Annual Report. We record stock-based compensation expense within both exploration and mine development costs, and general and administrative expenses in the statements of operations. Costs are allocated among those receiving the benefit based upon job function. There are certain employees who serve both functions, and therefore, their stock-based compensation expense is split between both financial statement lines in the consolidated statements of operations.

Estimating fair value for share-based payment transactions requires determination of the most appropriate valuation model, which depends on the terms and conditions of the grant. This estimate also requires determination of the most appropriate inputs to the valuation model including the expected life of the share option, volatility, dividend yield and risk-free interest rate and making assumptions about them.

Changes to these inputs would impact the consequent valuation for each equity instrument valued in this manner, and consequently, the value of each grant would vary in a different manner depending on the change to the respective inputs.

The fair value determined at the grant date is expensed on a straight-line basis over the vesting period, based on our estimate of equity instruments that will eventually vest. At each reporting date, we revise our estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates, if any, is recognized in profit or loss over the remaining vesting period, with a corresponding adjustment to the share-based payments reserve.

Investments in Unconsolidated Entities

We strategically invest in unconsolidated entities that we believe will provide us access to hard rock lithium assets as well as projects with the potential for scale, low-cost, sustainable production practices and that are strategically located to our proposed lithium hydroxide manufacturing sites.

Our unconsolidated entities are accounted for by the equity method of accounting because we have a significant influence, but not control, in the investee. We record our investments in these entities in our consolidated balance sheets as "Equity investments in unconsolidated affiliates" and our pro-rata share of the entities' earnings or losses in our consolidated statements of operations as "Loss from equity investments in unconsolidated affiliates."

We look at specific criteria and use our judgment when determining if we have a controlling interest in a less than wholly-owned entity. Factors considered in determining whether we have significant influence, or we have control, include, but are not limited to, ownership percentage, the ability to appoint individuals to the investee's board of directors, operational decision-making authority, and participation in policy-making decisions. The accounting policy relating to the use of the equity method of accounting is a critical accounting policy due to the judgment required in determining whether we have significant influence over the entity.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Our exposure to the risk of changes in market interest rates relates primarily to our cash and short-term deposits with a floating interest rate. These financial assets do not expose us to material cash flow interest rate risk. All other financial assets and liabilities, in the form of payables, lease liabilities, and long-term debt, are non-interest bearing. As of December 31, 2022 and 2021, we had \$99.2 million, and \$64.2 million, respectively, of cash and short-term deposits. We currently do not engage in any hedging or derivative transactions to manage interest rate risk.

Foreign Currency Risk

We currently do not enter into hedging or derivative transactions to manage foreign currency risk as our exposure to foreign currency risk is not material.

Commodity Price Risk

We are exposed to commodity price risk because commodity prices affect the economic feasibility of mining on our properties, the value of such properties and the potential timing of construction for our concentrator and chemical plant in North Carolina. These commodity prices can be volatile and are influenced by factors beyond our control. We currently do not enter into hedging or derivative transactions to manage commodity price risk.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

See "Index to Consolidated Financial Statements" beginning on page F-1 of our Annual Report.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

Item 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

Our management, under supervision and with the participation of our CEO (our Principal Executive Officer) and Chief Financial Officer ("CFO") (our Principal Financial Officer and Principal Accounting Officer), evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of December 31, 2022. Based on the evaluation of our disclosure controls and procedures, our CEO and CFO have concluded that our disclosure controls and procedures were effective as of December 31, 2022.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. This rule defines internal control over financial reporting as a process designed by, or under the supervision of, a company's CEO and CFO and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. This assessment was performed under the direction and supervision of our CEO and CFO and based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Our management's assessment of the effectiveness of our internal control over financial reporting included testing and evaluating the design and operating effectiveness of our internal controls. Based on this assessment, management has concluded that we maintained effective internal control over financial reporting as of December 31, 2022, based on criteria established in the COSO 2013 framework.

Deloitte & Touche LLP, our independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2022. Their report is included below.

Inherent Limitations of Internal Controls

Our management, including our CEO and CFO, does not expect that our disclosure controls and procedures or our internal controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and we cannot assure you that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements due to error or fraud.

Changes in Internal Control over Financial Reporting

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to evaluate annually the effectiveness of our internal controls over financial reporting as of the end of each fiscal year, and to include a management report assessing the effectiveness of our internal control over financial reporting in all annual reports. There were no changes in our internal control over financial reporting during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Piedmont Lithium Inc.,

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Piedmont Lithium Inc. and subsidiaries (the "Company") as of December 31, 2022, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022, of the Company and our report dated March 1, 2023, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

Charlotte, North Carolina
March 1, 2023

Item 9B. OTHER INFORMATION.

None.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The information required by this item with respect to our executive officers appears in Part I of our Annual Report under the heading, "Executive Officers of the Registrant." The other information required by this item is incorporated by reference to our definitive Proxy Statement for our 2023 Annual Meeting of Stockholders to be held on or about June 15, 2023, which will be filed with the SEC within 120 days of the year ended December 31, 2022, covered by our Annual Report ("*Proxy Statement*").

Item 11. EXECUTIVE COMPENSATION.

The information required by this item is incorporated by reference to the Proxy Statement.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The information required by this item is incorporated by reference to the Proxy Statement.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

The information required by this item is incorporated by reference to the Proxy Statement.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required by this item is incorporated by reference to the Proxy Statement.

PART IV

Item 15. EXHIBITS.

1. Financial Statements

See Part II, Item 8, "Index to Consolidated Financial Statements" in our Annual Report.

2. Financial Statement Schedules

Financial statement schedules have not been included because they are not applicable, or the information is included in financial statements or notes thereto.

3. Exhibits

The exhibits listed on the accompanying Exhibit Index are filed or incorporated by reference as part of our Annual Report and such Exhibit Index is incorporated herein by reference

Exhibit Index

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of Piedmont Lithium Inc. (filed with the SEC as Exhibit 3.1 to the Company's Current Report on Form 8-K12B filed on May 18, 2021)
3.2	Amended and Restated Bylaws of Piedmont Lithium Inc. (filed with the SEC as Exhibit 3.2 to the Company's Current Report on Form 8-K12B filed on May 18, 2021)
4.1	Description of Securities (filed with the SEC as Exhibit 4.1 the Company's Annual Report on Form 10-K filed on September 24, 2021)
10.1+	Piedmont Lithium Inc. 2021 Stock Incentive Plan (filed with the SEC as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 18, 2021)
10.2+	Executive Employment Agreement, dated as of September 22, 2021, by and between Keith Phillips, Piedmont Lithium Inc. and Piedmont Lithium Carolinas, Inc. (filed with the SEC as Exhibit 10.2 to the Company's Annual Report on Form 10-K filed on September 24, 2021)
10.3+	Executive Employment Agreement, dated as of June 4, 2021, by and between Michael White and Piedmont Lithium Inc. (filed with the SEC as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 4, 2021)
10.4+	Executive Employment Agreement, dated as of September 22, 2021, by and between Bruce Czachor and Piedmont Lithium Inc. and Piedmont Lithium Carolinas, Inc. (filed with the SEC as Exhibit 10.4 to the Company's Annual Report on Form 10-K filed on September 24, 2021)
10.5+	Executive Employment Agreement, dated as of September 22, 2021, by and between Patrick Brindle and Piedmont Lithium Inc. and Piedmont Lithium Carolinas, Inc. (filed with the SEC as Exhibit 10.5 to the Company's Annual Report on Form 10-K filed on September 24, 2021)
10.6+*	Executive Employment Agreement, dated as of December 8, 2022, by and between Krishna Y. McVey and Piedmont Lithium Inc. and Piedmont Lithium Carolinas, Inc.
10.7+*	Executive Employment Agreement, dated as of December 8, 2022, by and between Austin D. Devaney and Piedmont Lithium Inc.
21.1*	Subsidiaries of the Registrant
23.1*	Consent of Independent Registered Public Accounting Firm, Deloitte & Touche, LLP
23.2*	Consent of BDO Audit Pty Ltd
23.3*	Consent of Nexia Brisbane Audit Pty Ltd
23.4*	Consent of Qualified Person (Dr. Steven Keim, Marshall, Miller & Associates)
23.5*	Consent of Qualified Person (Leon McGarry)
23.6*	Consent of Qualified Person (Peter Grigsby, Primero Americas Inc.)
31.1*	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification of Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
96.1	Technical Report Summary, dated January 25, 2022 (filed with the SEC as Exhibit 96.1 to the Company's Current Report on Form 8-K/A filed on February 1, 2022)

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96.2*	Technical Report Summary, dated February 27, 2023
99.1*	Consolidated Financial Statements of Atlantic Lithium Lithium and its subsidiaries, for the year ended June 30, 2022 and 2021
99.2*	Consolidated Financial Statements of Sayona Mining Limited and its controlled entities, for the year ended June 30, 2022 and 2021
101.INS*	XBRL Instance Document - - embedded within the Inline XBRL document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover page Interactive Data file (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

+ Indicates management contract or compensatory plan.

Item 16. ANNUAL REPORT ON FORM 10-K SUMMARY.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Piedmont Lithium Inc.
(Registrant)

Date: March 1, 2023

By: /s/ Michael White

Michael White
Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Name	Title	Date
<u>/s/ Keith Phillips</u> Keith Phillips	President and Chief Executive Officer (Principal Executive Officer)	March 1, 2023
<u>/s/ Michael White</u> Michael White	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 1, 2023
<u>/s/ Jeffrey Armstrong</u> Jeffrey Armstrong	Chairman and Director	March 1, 2023
<u>/s/ Jorge Beristain</u> Jorge Beristain	Director	March 1, 2023
<u>/s/ Claude Demby</u> Claude Demby	Director	March 1, 2023
<u>/s/ Susan Jones</u> Susan Jones	Director	March 1, 2023

Index to Consolidated Financial Statements

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Consolidated Statements of Cash Flows for the year ended December 31, 2022, the six months ended December 31, 2021 and the years ended June 30, 2021 and 2020	F-7
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Piedmont Lithium Inc.,

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Piedmont Lithium Inc. and subsidiaries (the "Company") as of December 31, 2022, and 2021, the related consolidated statements of operations, comprehensive income, changes in equity, and cash flows, for the year ended December 31, 2022, six-month period ended December 31, 2021, and each of the two years in the period ended June 30, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the year ended December 31, 2022, the six months ended December 31, 2021, and each of the two years in the period ended June 30, 2021, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Equity Method Investments – Refer to Note 2 and 4 to the financial statements

Critical Audit Matter Description

The Company applies the equity method of accounting for investments in which they have significant influence as contemplated within Accounting Standards Codification (ASC) Topic 323 – "Investments – Equity Method and Joint Ventures." Management has determined that they have significant influence over the Sayona Mining Limited, Sayona Quebec Inc., and Atlantic Lithium Limited investments, and therefore have accounted for these investments in accordance with ASC Topic 323. The application of the accounting model under ASC Topic 323 requires an enhanced amount of professional judgment by management, including the initial determination and periodic reassessment of the ability to exert significant influence over the investee, evaluating the financial reporting impacts of foreign currency translation, changes in the value of the Company's investments due to dilutive equity transactions by the investees, and the required financial statement disclosures. As of December 31, 2022, the Company has approximately \$95.6 million recorded as investments in unconsolidated affiliates on its balance sheet, representing approximately 33% of total assets.

We identified the Company's accounting for its equity method investees as a critical audit matter due to the judgments made by management in applying the provisions of ASC 323 to investee-level transactions which impact either the ownership or valuation of its equity method investments. We performed audit procedures to evaluate the reasonableness of management's conclusions based on

current year facts and circumstances, which required a high degree of auditor judgment and an increased extent of effort, including the need to involve our equity method investment accounting specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the accounting for equity method investments included the following, among others:

- We evaluated the design and tested the operating effectiveness of management's controls over its equity method investments in unconsolidated affiliates during the year ended December 31, 2022.
- We evaluated the Company's disclosures related to equity method investments, including a comparison of the footnote disclosures per the Form 10-K to other comparable disclosures in SEC filings and the disclosure requirements under Rule 3-09 of SEC Regulation S-X due to the significance of the Sayona Mining Limited, Sayona Quebec, and Atlantic Lithium equity method investments.
- Performed substantive testing procedures as follows:
 - Vouched additional contributions to cash paid to unconsolidated affiliates to amounts presented within the face of the financial statements and notes to the financial statements, and evaluated whether those additional contributions required reassessment of the Company's significant influence over the investees.
 - Evaluated the Company's calculation of currency translation adjustments applicable to its equity method investments utilizing independently obtained third-party foreign exchange rates.
 - Audited the Company's calculation of the gains on dilution recorded during the year resulting from dilutive equity transactions by the investees, including agreeing information associated with those equity transactions to third-party statements where applicable, and to the amounts presented within the face of the financial statements and notes to the financial statements.
- We obtained representation from management asserting that the Company continues to account for certain investments under the equity method of accounting because the Company is able to exert significant influence, but not control, over the investees.

/s/ DELOITTE & TOUCHE LLP

Charlotte, North Carolina
March 1, 2023

We have served as the Company's auditor since 2021.

PIEDMONT LITHIUM INC.
CONSOLIDATED BALANCE SHEETS

	December 31, 2022	December 31, 2021
Assets		
Cash and cash equivalents	\$ 99,246,963	\$ 64,244,983
Other current assets	2,611,841	2,514,602
Total current assets	101,858,804	66,759,585
Property, plant and mine development, net	71,540,798	40,055,354
Other non-current assets	18,873,679	4,561,122
Equity method investments in unconsolidated affiliates	95,647,802	58,872,710
Total assets	\$ 287,921,083	\$ 170,248,771
Liabilities and Stockholders' Equity		
Accounts payable and accrued expenses	12,861,514	6,688,242
Current portion of long-term debt	425,187	762,189
Other current liabilities	124,464	99,587
Total current liabilities	13,411,165	7,550,018
Long-term debt, net of current portion	163,425	914,147
Operating lease liabilities, net of current portion	1,176,709	—
Deferred tax liabilities	2,881,123	—
Total liabilities	17,632,422	8,464,165
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Common stock; \$ 0.0001 par value, 100,000,000 shares authorized; 18,073,367 and 15,894,395 shares issued and outstanding at December 31, 2022, and December 31, 2021, respectively	1,807	1,589
Additional paid-in capital	381,241,814	255,131,836
Accumulated deficit	(105,657,674)	(92,683,000)
Accumulated other comprehensive loss	(5,297,286)	(665,819)
Total stockholders' equity	270,288,661	161,784,606
Total liabilities and stockholders' equity	\$ 287,921,083	\$ 170,248,771

The accompanying notes are an integral part of these financial statements.

PIEDMONT LITHIUM INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31, 2022	Six Months Ended December 31, 2021	Years Ended June 30,	
			2021	2020
Operating expenses:				
Exploration and mine development costs	\$ 1,939,498	\$ 9,628,803	\$ 10,874,502	\$ 3,125,784
General and administrative expenses	29,448,567	10,956,005	8,861,454	3,440,161
Total operating expenses	31,388,065	20,584,808	19,735,956	6,565,945
Loss from equity method investments in unconsolidated affiliates	(8,352,290)	(642,135)	(64,626)	—
Loss from operations	(39,740,355)	(21,226,943)	(19,800,582)	(6,565,945)
Other income (expense):				
Interest income	1,153,012	—	3,378	161,530
Interest expense	(115,029)	(112,869)	(271,264)	(107,569)
(Loss) gain from foreign currency exchange	(87,931)	(8,543)	74,620	632,832
Gain on dilution of equity method investments in unconsolidated affiliates	28,954,893	—	—	—
Total other income (expense)	29,904,945	(121,412)	(193,266)	686,793
Loss before taxes	(9,835,410)	(21,348,355)	(19,993,848)	(5,879,152)
Income tax expense	3,139,264	—	—	—
Net loss	\$ (12,974,674)	\$ (21,348,355)	\$ (19,993,848)	\$ (5,879,152)
Basic and diluted net loss per weighted-average share	\$ (0.74)	\$ (1.35)	\$ (1.48)	\$ (0.71)
Basic and diluted weighted-average number of shares outstanding	17,517,678	15,868,521	13,551,150	8,283,567

The accompanying notes are an integral part of these financial statements.

PIEDMONT LITHIUM INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Net loss	\$ (12,974,674)	\$ (21,348,355)	\$ (19,993,848)	\$ (5,879,152)
Other comprehensive income (loss):				
Foreign currency translation adjustments	—	—	—	(499,399)
Equity method investments adjustments in other comprehensive income (loss), net of tax ⁽¹⁾	(4,631,467)	162,034	(31,288)	—
Other comprehensive income (loss), net of tax	(4,631,467)	162,034	(31,288)	(499,399)
Comprehensive loss	\$ (17,606,141)	\$ (21,186,321)	\$ (20,025,136)	\$ (6,378,551)

(1) Equity method investments income in other comprehensive income (loss) is presented net of tax benefit of 258,141 for the twelve months ended December 31, 2022. We did not reflect a tax expense during the six months ended December 31, 2021 and years ended June 30, 2021 and 2020, because we had a full tax valuation allowance in impacted jurisdictions during these periods.

The accompanying notes are an integral part of these financial statements.

PIEDMONT LITHIUM INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Cash flows from operating activities:				
Net loss	\$ (12,974,674)	\$ (21,348,355)	\$ (19,993,848)	\$ (5,879,152)
Adjustments to reconcile net loss to net cash used in operating activities:				
Stock-based compensation expense	3,489,965	2,003,116	1,319,372	470,939
Loss from equity method investments in unconsolidated affiliates	8,352,290	642,135	64,626	—
Gain on dilution of equity method investments in unconsolidated affiliates	(28,954,893)	—	—	—
Deferred taxes	3,139,264	—	—	—
Depreciation	73,697	8,697	11,589	13,249
Noncash lease expense	106,728	78,878	143,734	122,759
Loss on sale of property, plant and mine development	11,542	—	—	—
Unrealized loss on investment	29,676	—	—	—
Changes in operating assets and liabilities:				
Other assets	(200,730)	(717,101)	(1,385,134)	(29,736)
Operating lease liabilities	(97,460)	(81,005)	(144,096)	(118,555)
Accounts payable	1,413,406	(1,299,090)	1,770,570	(642,293)
Accrued expenses and other current liabilities	(837,338)	3,038,552	1,955,933	(269,512)
Net cash used in operating activities	(26,448,527)	(17,674,173)	(16,257,254)	(6,332,301)
Cash flows from investing activities:				
Capital expenditures	(25,731,907)	(12,499,383)	(18,207,381)	(3,452,254)
Advances on Ewoyaa Lithium Project (Ghana)	(13,006,267)	(4,310,173)	—	—
Purchases of equity investments in unconsolidated affiliates	(21,062,097)	(43,603,824)	(16,358,412)	—
Net cash used in investing activities	(59,800,271)	(60,413,380)	(34,565,793)	(3,452,254)
Cash flows from financing activities:				
Proceeds from issuances of common stock, net of issuance costs	122,059,476	—	174,964,132	25,108,987
Proceeds from exercise of stock options	279,026	557,100	349,047	—
Principal payments on long-term debt	(1,087,724)	(876,212)	(695,572)	(390,434)
Net cash provided by (used in) financing activities	121,250,778	(319,112)	174,617,607	24,718,553
Net increase (decrease) in cash	35,001,980	(78,406,665)	123,794,560	14,933,998
Cash and cash equivalents at beginning of period	64,244,983	142,651,648	18,857,088	4,432,150
Effect of exchange rate changes on cash	—	—	—	(509,060)
Cash and cash equivalents at end of period	\$ 99,246,963	\$ 64,244,983	\$ 142,651,648	\$ 18,857,088
Supplemental disclosure of cash flow information:				
Noncash capital expenditures in accounts payable and accrued expenses	\$ 5,557,047	\$ —	\$ —	\$ —
Cash paid for interest	115,028	112,869	289,125	157,271
Capitalized stock-based compensation	281,729	—	—	—
Noncash acquisitions of mining interests financed by sellers	—	241,002	689,500	2,708,052

The accompanying notes are an integral part of these financial statements.

PIEDMONT LITHIUM INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
June 30, 2019	6,707,363	\$ 671	\$ 51,140,336	\$ (46,245,126)	\$ (297,166)	\$ 4,598,715
Issuance of common stock, net	3,535,000	354	25,108,634	—	—	25,108,988
Stock-based compensation, net of forfeitures	—	—	470,939	—	—	470,939
Shares issued for exercise/vesting of share-based compensation awards	89,399	—	—	—	—	—
Expiration of stock options	—	—	(531,934)	531,934	—	—
Conversion of performance rights	25,000	—	—	—	—	—
Impact of ASC Topic 842 adoption	—	—	—	3,205	—	3,205
Foreign currency translation adjustments	—	—	—	—	(499,399)	(499,399)
Net loss	—	—	—	(5,879,152)	—	(5,879,152)
June 30, 2020	10,356,762	1,025	76,187,975	(51,589,139)	(796,565)	23,803,296
Issuance of common stock, net of issuance costs	5,250,000	525	174,963,607	—	—	174,964,132
Stock-based compensation, net of forfeitures	—	—	1,319,372	—	—	1,319,372
Shares issued for exercise/vesting of stock-based compensation awards	152,771	—	349,047	—	—	349,047
Expiration of stock options	—	—	(248,342)	248,342	—	—
Conversion of performance rights	5,000	—	—	—	—	—
Equity method investments adjustments in other comprehensive income (loss), net of tax	—	—	—	—	(31,288)	(31,288)
Net loss	—	—	—	(19,993,848)	—	(19,993,848)
June 30, 2021	15,764,533	1,550	252,571,659	(71,334,645)	(827,853)	180,410,711
Stock-based compensation, net of forfeitures	—	—	2,003,116	—	—	2,003,116
Shares issued for exercise/vesting of stock-based compensation awards	104,862	10	557,090	—	—	557,100
Conversion of performance rights	25,000	29	(29)	—	—	—
Equity method investments adjustments in other comprehensive income (loss), net of tax	—	—	—	—	162,034	162,034
Net loss	—	—	—	(21,348,355)	—	(21,348,355)
December 31, 2021	15,894,395	1,589	255,131,836	(92,683,000)	(665,819)	161,784,606
Issuance of common stock, net of issuance costs	2,012,500	201	122,059,275	—	—	122,059,476
Stock-based compensation, net of forfeitures	—	—	3,771,694	—	—	3,771,694
Shares issued for exercise/vesting of stock-based compensation awards	166,472	17	279,009	—	—	279,026
Equity method investments adjustments in other comprehensive income (loss), net of tax	—	—	—	—	(4,631,467)	(4,631,467)
Net loss	—	—	—	(12,974,674)	—	(12,974,674)
December 31, 2022	18,073,367	\$ 1,807	\$ 381,241,814	\$ (105,657,674)	\$ (5,297,286)	\$ 270,288,661

The accompanying notes are an integral part of these financial statements.

PIEDMONT LITHIUM INC.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF COMPANY

Nature of Business

Piedmont Lithium Inc. ("Piedmont Lithium," "we," "our," "us," or "Company") is a United States ("U.S.") based, development stage company advancing a multi-asset, integrated lithium business in support of a clean energy economy and America's national energy security. We plan to supply lithium hydroxide to the electric vehicle and battery manufacturing supply chains in North America by processing spodumene concentrate produced from assets we own or have an economic interest.

Our projects include our wholly-owned, proposed Tennessee Lithium Project ("Tennessee Lithium") and our wholly-owned, proposed, fully-integrated Carolina Lithium Project ("Carolina Lithium") in the southeastern U.S. and strategic investments in lithium assets in Canada and Ghana. Spodumene concentrate production is expected to come online in Quebec in the first half of 2023 and first commercial shipments are anticipated in the third quarter of 2023. Subject to obtaining permits, approvals, and financing, we plan to obtain spodumene concentrate through our offtake agreement in Ghana (2024-2025), produce lithium hydroxide in Tennessee (2025-2026), and to develop spodumene concentrate and produce lithium hydroxide in North Carolina (2026-2027).

Our investments in Canada should provide the opportunity for near-term revenue through our offtake of spodumene concentrate. Offtake agreements from our international investments are expected to supply spodumene concentrate to Tennessee Lithium for conversion to lithium hydroxide, while Carolina Lithium is a fully integrated spodumene-to-hydroxide operation in North Carolina. These diversified operations should enable us to play a pivotal role in supporting America's energy independence and the electrification of transportation and energy storage.

Change in Fiscal Year-End

Effective January 1, 2022, we changed our fiscal year end from June 30 to December 31. The six-month period from July 1, 2021, to December 31, 2021, served as a transition period. Our fiscal year for 2022 commenced on January 1, 2022, and ended on December 31, 2022. Unless otherwise noted, all references to "years" in this report refer to the twelve-month fiscal year, which prior to July 1, 2021 ended on June 30 and beginning after January 1, 2022 ends on December 31 of each year.

Basis of Presentation

Our consolidated financial statements and related notes have been prepared on the accrual basis of accounting in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") and in conformity with the rules and regulations of the Securities and Exchange Commission (the "SEC"). The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. Unless otherwise indicated, all references to "\$" are to U.S. dollars, and all references to "AUD" are to Australian dollars. Our reporting currency is U.S. dollars.

Certain prior period amounts have been reclassified to conform with the current period presentation including reclassification of the Company's proportional share of income in equity investments into operating income. See Note 4— *Equity Method Investments in Unconsolidated Affiliates* for further discussion.

Piedmont Lithium acquired all of the issued and outstanding ordinary shares of Piedmont Lithium Pty Ltd (formerly named Piedmont Lithium Limited) ("Piedmont Australia"), our Australian predecessor and currently a wholly-owned subsidiary, pursuant to a Scheme of Arrangement under Australian law, which was approved by Piedmont Australia's shareholders on February 26, 2021 and by the Supreme Court of Western Australia on May 5, 2021 (collectively referred to as "Redomiciliation"). As part of the Redomiciliation, we changed our place of domicile from Australia to the state of Delaware in the U.S., effective May 17, 2021.

Piedmont Australia's ordinary shares were listed on the Australian Securities Exchange ("ASX"), and Piedmont Australia's American Depositary Shares ("ADSs"), each representing 100 of Piedmont Australia's ordinary shares, were traded on the Nasdaq Capital Market ("Nasdaq"). Following the approval of the Redomiciliation, we moved the primary listing of our shares of common stock from the ASX to Nasdaq and retained an ASX listing via Chess Depositary Interests ("CDIs"), each representing 1/100th of a share of common stock of Piedmont Lithium Inc.

All issued and outstanding shares of our common stock and per share amounts have been retroactively adjusted in these consolidated financial statements to reflect the 100 :1 ratio and share consolidation. Shares of our common stock issued in connection with the Redomiciliation trade on Nasdaq under the symbol "PLL."

Risk and Uncertainties

We are subject to a number of risks similar to those of other companies of similar size in our industry, including but not limited to, the success of our exploration and development activities, success of our equity investments in international projects, construction and permitting delays, the need for additional capital or financing to fund operating losses, competition from substitute products and services from larger companies, protection of proprietary technology, litigation, and dependence on key individuals.

We have accumulated deficits of \$ 105.7 million, and \$ 92.7 million as of December 31, 2022 and December 31, 2021, respectively. We have incurred net losses and utilized cash in operations since inception, and we expect to incur future additional losses. We have cash available on hand and believe this cash will be sufficient to fund our operations and meet our obligations as they come due for at least one year from the date these consolidated financial statements are issued. In the event our cash requirements change during the next twelve months, management has the ability and commitment to make corresponding changes to our operating expenses as necessary. Until commercial production is achieved from our planned operations, we will continue to incur operating and investing net cash outflows associated with, among other things, funding capital projects, development stage technical studies, permitting activities associated with our projects, funding our commitments in Quebec and Ghana, maintaining and acquiring exploration properties and undertaking ongoing exploration activities. Our long-term success is dependent upon our ability to successfully raise additional capital or financing or enter into strategic partnership opportunities. Our long-term success is also dependent upon our ability to obtain certain permits and approvals, develop our planned portfolio of projects, earn revenues, and achieve profitability.

Our consolidated financial statements have been prepared on a going-concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates, assumptions, and allocations that affect amounts reported in the consolidated financial statements and related notes. Significant items that are subject to such estimates and assumptions include, but are not limited to, long-lived assets, fair value of stock-based compensation awards, income tax uncertainties, valuation of deferred tax assets, contingent assets and liabilities, legal claims, asset impairments and environmental remediation. Actual results could differ due to the uncertainty inherent in the nature of these estimates.

We base our estimates and assumptions on current facts, historical experience and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the accrual of costs and expenses that are not readily apparent from other sources. Actual results may differ materially and adversely from our estimates. To the extent there are material differences between the estimates and the actual results, future results of operations will be affected.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Cash and Cash Equivalents

We consider all highly liquid instruments with a maturity of three months or less at the time of issuance to be cash equivalents. We maintain cash deposits with high credit quality financial institutions. The deposits with these financial institutions may exceed the federally insured limits; however, these deposits typically are redeemable upon demand. We have not experienced any losses because of these deposits and do not expect to incur any losses in the future.

Long-Lived Assets

Mining Interests

Mining interests are recorded at cost and include land acquisition payments and land option payments to landowners, which include legal fees and other direct costs to enter into these contract agreements. We own land, specifically surface properties and the associated mineral rights, as part of Carolina Lithium in the U.S., specifically in North Carolina. We have entered into exclusive option agreements or land acquisition agreements, which upon exercise, allow us to purchase, or in some cases lease, surface properties and the associated mineral rights in North Carolina from landowners. For those properties under option, no liability is

recorded until we are certain of exercising the option. Mining interests in the exploration and development stage are not amortized until the underlying property is converted to the production stage, at which point the mining interests are depleted over the estimated recoverable proven and probable reserves.

Development stage mining interests represent interests in properties under development that contain proven and probable reserves. Exploration stage mining interests represent interests in properties that are believed to potentially contain mineralized material consisting of: (i) mineralized material within pits; mineralized material with insufficient drill spacing to qualify as proven and probable reserves as well as mineralized material in close proximity to proven and probable reserves; (ii) around-mine exploration potential not immediately adjacent to existing reserves and mineralization, but located within the immediate mine area; (iii) other mine-related exploration potential that is not part of current mineralized material and is comprised mainly of material outside of the immediate mine area; (iv) greenfield exploration potential that is not associated with any other production, development or exploration stage property, as described above; or (v) any acquired right to explore or extract a potential mineral deposit. The Company's mineral rights generally are enforceable regardless of whether proven and probable reserves have been established.

Mine Development

Mine development assets include engineering and metallurgical test-work, drilling and other related costs to delineate an ore body, and the removal of overburden to initially expose an ore body at open pit surface mines. Costs incurred before mineral resources are classified as proven and probable reserves are expensed and recorded to "Exploration and mine development costs" in our statements of operations. Capitalization of mine development project costs begins once mineral resources are classified as proven and probable reserves. Drilling and related costs are capitalized for an ore body where proven and probable reserves exist and the activities are directed at obtaining additional information on the ore body or converting mineralized material to proven and probable reserves. All other drilling and related costs are expensed as incurred. The cost of removing overburden and waste materials to access the ore body at an open pit mine prior to the production phase are referred to as pre-stripping costs. Pre-stripping costs will be capitalized during the development of an open pit mine. The removal, production, and sale of de minimis salable materials may occur during the development phase of an open pit mine and are assigned incremental mining costs related to the removal of that material. Mine development assets will be depleted using the units-of-production method based on estimated recoverable metric tons in proven and probable reserves. To the extent that these costs benefit an entire ore body, they will be depleted over the estimated life of the ore body. As of December 31, 2022, we had no projects in the production phase, and we did not record depletion expense for any of our mine development assets.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost, net of accumulated depreciation and depletion. Depreciation is computed on a straight-line basis over the estimated useful lives.

Impairment of Long-Lived Assets

Assets that are subject to depreciation, depletion or amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable, or for non-depreciable assets in accordance with ASC Topic 360, "Property, Plant, and Equipment." Circumstances which could trigger a review include, but are not limited to: significant decreases in the market price of the asset; significant adverse changes in the business climate or legal factors; accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of the asset; current period cash flow or operating loss combined with a history of losses or a forecast of continuing losses associated with the use of the asset; and current expectation that the asset will more likely than not be sold or disposed before the end of its estimated useful life.

Recoverability of assets is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by an asset. If the carrying amount of an asset exceeds its estimated future undiscounted cash flows, an impairment charge is recognized at the amount by which the carrying amount exceeds the estimated fair value of the asset. The estimated fair value is determined using a discounted cash flow analysis. Any impairment in value is recognized as an expense in the period when the impairment occurs. We did not recognize impairment charges associated with long-lived assets for the year ended December 31, 2022, the six months ended December 31, 2021 or years ended June 30, 2021, and 2020.

Asset Retirement Obligations

We follow the provisions of ASC Topic 410, "Asset Retirement and Environmental Obligations," which establishes standards for the initial measurement and subsequent accounting for obligations associated with the sale, abandonment or other disposal of long-lived tangible assets arising from the acquisition, construction or development and for normal operations of such assets. We record the fair

value of a liability for an asset retirement obligation as an asset and liability when there is a legal obligation associated with the retirement of a tangible long-lived asset and the liability can be reasonably estimated. The legal obligation to perform the asset retirement activity is unconditional, even though uncertainty may exist about the timing and/or method of settlement that may be beyond the entity's control. As of December 31, 2022 and 2021, we did not record a provision for asset retirement obligation as no such condition had been met.

Exploration and Mine Development Costs

We incur costs in resource exploration, evaluation and development during the different phases of our resource development projects. Exploration costs incurred before the declaration of proven and probable resources, which primarily include exploration, drilling, engineering, metallurgical test-work, and compensation for employees associated with exploration activities, are expensed as incurred. We have also expensed as incurred engineering costs attributable to the evaluation of land for our future concentrator and chemical plants, development project management costs, feasibility studies and other project expenses that do not qualify for capitalization. After proven and probable resources are declared, exploration and mine development costs necessary to bring the property to commercial capacity or increase the capacity or useful life are capitalized.

Foreign Currencies

These consolidated financial statements have been presented in U.S. dollars, which is our reporting currency. Effective June 30, 2020, we adopted the U.S. dollar as our functional currency, triggered by an increased exposure to the U.S. dollar, as our future operating and capital costs are expected to be in U.S. dollars. The change in functional currency was applied prospectively from June 30, 2020 in accordance with U.S. GAAP.

Gains and losses arising from translations or settlements of foreign currency denominated transactions or balances are included in the determination of income. Foreign currency translation adjustments resulting from the change in functional currency are included in "Other comprehensive income (loss), net of tax," and gains and losses resulting from foreign currency transactions are presented in "(Loss) gain from foreign currency exchange" in our consolidated financial statements.

Loss per Share

We compute loss per share in accordance with ASC Topic 260, "*Earnings per Share*." Basic net loss per common share is computed by dividing net loss by the weighted-average number of shares of common shares outstanding during the period. Diluted net loss per share of common stock is computed by giving effect to all potential dilutive shares of common stock, including options, restricted stock units and performance awards. Basic and diluted net loss per share of common stock were the same for all periods presented as the impact of all potentially dilutive securities outstanding was anti-dilutive.

Revenue Recognition

We are a development stage company and have no revenues. Specific evaluations described in ASC Topic 606, "*Revenue from Contracts with Customers*," will be performed once we begin earning revenues. In accordance with ASC Topic 606, revenue will be measured as the amount of consideration received in exchange for transferring goods or providing services, and will be recognized when performance obligations are satisfied under the terms of contracts with customers. A performance obligation will be deemed to be satisfied when control of the product is transferred to the customer.

Stock-based Compensation

We record stock-based compensation in accordance with ASC Topic 718, "*Stock Compensation*." Equity-settled stock-based payments are provided to directors, officers, employees, consultants and other advisors. These stock-based payments are measured at the fair value of the equity instrument at the grant date in accordance with ASC Topic 718. Fair value is determined using the Black-Scholes valuation model. We have applied a graded (tranche-by-tranche) attribution method and record stock-based compensation expense on an accelerated basis over the vesting period of the share award. Forfeitures are accounted for in the period incurred.

Fair Value of Financial Instruments

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

We follow ASC Topic 820, "Fair Value Measurement and Disclosure," which establishes a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy categorizes assets and liabilities measured at fair value into one of three different levels depending on the observability of the inputs employed in the measurement. The three levels are defined as follows:

- Level 1: Quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2: Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable for the asset or liability, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, inputs other than quoted prices that are observable for the asset or liability and inputs that are derived from observable market data by correlation or other means.
- Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The level within which the financial asset or liability is classified is determined based on the lowest level of significant input to the fair value measurement.

Measurement of Fair Value

Our material financial instruments consist primarily of cash and cash equivalents, investments in equity securities, trade and other payables, and long-term debt as follows:

- Long-term debt—As of December 31, 2022 and 2021, we had \$ 0.6 million and \$ 1.7 million, respectively, of principal debt outstanding associated with seller financed loans. The carrying value of our long-term debt approximates its estimated fair value.
- As of December 31, 2022 and 2021, we had \$ 0.5 million and \$ 0.5 million, respectively, of investments in equity securities which are recorded at fair value based on Level 3 inputs. See Note 5—Other Assets.
- Other financial instruments—The carrying amounts of cash and cash equivalents and trade and other payables approximate fair value due to their short-term nature.

Level 3 activity was not material for all periods presented.

Income Taxes

We account for income taxes using the asset and liability method. Under the asset and liability method, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. In addition, deferred tax assets are also recorded with respect to net operating losses and other tax attribute carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. Valuation allowances are established when realization of the benefit of deferred tax assets is not deemed to be more likely than not. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

We intend to continue maintaining a valuation allowance on our deferred tax assets if, in our judgement, it appears that it is more likely than not that all or some portion of the asset will not be realized. When assessing the need for a valuation allowance, we considered all available evidence, including all potential sources of taxable income, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as any other available and relevant information. Existing valuation allowances are re-examined each period. If it were determined that it is more likely than not that a deferred tax asset will be realized, the appropriate amount of the valuation allowance, if any, would be released in the period this determination is made.

We only recognize a tax benefit after concluding that it is more likely than not that the benefit will be sustained upon audit by the respective taxing authority based solely on the technical merits of the associated tax position. Once the recognition threshold is met, we recognize a tax benefit measured as the largest amount of the tax benefit that, in our judgment, is greater than 50% likely to be realized. Interest and penalties related to income tax liabilities are included in "Income tax expense (benefit)" in our consolidated statements of operations.

Equity Method Investments in Unconsolidated Affiliates

We apply the equity method of accounting for investments when we have significant influence, but not controlling interest in the investee. Judgment regarding the level of influence over each equity method investment includes key factors such as ownership

interest, representation on the board of directors, participation in policy-making decisions, operational decision-making authority, and material intercompany transactions. In applying the equity method, we record the investment at cost and subsequently increase or decrease the carrying amount of the investment by our proportionate share of the net earnings or losses and other comprehensive income of the investee, adjusted for differences between their local GAAP and U.S. GAAP. Our investment balance is also adjusted for currency translation adjustments representing fluctuations between the functional currency of the investees. The carrying value of our equity method investments is reported as "Equity method investments in unconsolidated affiliates", adjustments related to foreign currency adjustments and our proportional shares of other comprehensive income (loss) is reported in "Accumulated other comprehensive loss" in our consolidated balance sheets. For all equity method investments, we record our share of an investee's income or loss on a one quarter lag. We evaluate material events occurring during the quarter lag to determine whether the effects of such events should be disclosed in our financial statements. We classify distributions received from equity method investments using the cumulative earnings approach on our consolidated statements of cash flows. A change in our proportionate share of an investee's equity resulting from issuance of common shares or in-substance common shares by the investee to third parties is recorded as a gain or loss in our consolidated statements of operations in accordance with ASC Topic 323, "Investments-Equity Method and Joint Ventures," (Subtopic 10-40-1). We assess investments for impairment whenever events or changes in circumstances indicate that the carrying value of an investment may not be recoverable. If the decline in value is considered to be other than temporary, the investment is written down to its estimated fair value, which establishes a new cost basis in the investment. We did not record any such impairment charges for any periods presented.

Leases

We account for leases in accordance with ASC Topic 842, "Leases," which requires lessees to recognize lease liabilities and right-of-use ("ROU") assets on the balance sheet for contracts that provide lessees with the right to control the use of identified assets. As part of this adoption, we made certain accounting policy elections which are detailed in the recently adopted accounting pronouncements sub-section in Note 7—Leases, to the consolidated financial statements in our Annual Report. We evaluate whether our contractual arrangements contain leases at the inception of such arrangements. Specifically, management considers whether we control the underlying asset and have the right to obtain substantially all of the economic benefits or outputs from the asset.

ROU lease assets represent our right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments. Both the ROU lease asset and liability are recognized as of the lease commencement date based on the present value of the lease payments over the lease term. Our leases do not provide an implicit borrowing rate that can readily be determined. Therefore, we apply a discount rate based on the incremental borrowing rate, which is determined using our synthetic credit rating and other information available as of the lease commencement date. ROU lease assets also include any lease payments made before their contractual due dates and exclude any lease incentives.

Our lease agreements may include options to extend the lease term or to terminate the lease early. We include options to extend or terminate leases upon determination of the ROU lease asset and liability when we are reasonably certain we will exercise these options. Operating lease expense attributable to lease payments is recognized on a straight-line basis over the lease term and is included in "Exploration and mine development costs" in the consolidated statements of operations.

We evaluate ROU assets for impairment consistent under our impairment of long-lived assets policy. We had no sales-type or finance leases as of December 31, 2022 and 2021.

Recently Issued and Adopted Accounting Pronouncements

We have considered the applicability and impact of accounting pronouncements that have been issued by the FASB and other standard setting organizations which are not yet effective and which we have not yet adopted. The impact on our financial position and results of operations from adoption of these standards is not expected to be material.

3. PROPERTY, PLANT AND MINE DEVELOPMENT

Property, plant and mine development, net, is presented in the following table:

	December 31, 2022	December 31, 2021
Mining interests	\$ 56,119,627	\$ 39,303,043
Mine development	3,050,239	—
Land	720,033	688,829
Leasehold improvements	281,008	—
Facilities and equipment	675,795	107,248
Construction in process	10,779,566	—
Property, plant and mine development	71,626,268	40,099,120
Accumulated depreciation	(85,470)	(43,766)
Property, plant and mine development, net	\$ 71,540,798	\$ 40,055,354

Depletion of mining interests and mine development assets does not commence until the assets are placed in service. As of December 31, 2022, we have not recorded depletion expense for any of our mining interests or mine development assets.

Mining interests and mine development costs relate to Carolina Lithium. Our construction in process relates to capitalized costs associated with Tennessee Lithium and Carolina Lithium.

Depreciation expense is included in "General and administrative expenses" in our consolidated statements of operations. Depreciation expense was \$ 73,697 , \$ 8,697 , \$ 11,589 and \$ 13,249 for the year ended December 31, 2022, the six months ended December 31, 2021, and the years ended June 30, 2021 and 2020, respectively.

4. EQUITY METHOD INVESTMENTS IN UNCONSOLIDATED AFFILIATES

We apply the equity method to investments when we have the ability to exercise significant influence over the operational decision-making authority and financial policies of the investee. We account for our existing investments in Atlantic Lithium Limited ("Atlantic Lithium"), Sayona Mining Limited ("Sayona Mining"), and Sayona Quebec Inc. ("Sayona Quebec"), a subsidiary of Sayona, as equity method investments.

We continue to evaluate operational developments and the impact of the anticipated significant expansion of the operations of our existing equity method investments. As discussed below, Atlantic Lithium's completion of a prefeasibility study for the Ewoyaa Lithium Project ("Ewoyaa"), along with the anticipated restart of Sayona Quebec's North American Lithium ("NAL") Projects, were impactful to the consideration of how we most appropriately reflect our proportional share of income (loss) from our three existing equity method investments. Offtake agreements with our equity method investments are expected to supply the majority of the spodumene concentrate to Tennessee Lithium for conversion to lithium hydroxide, or re-sell into the market. Based on our analysis, it was determined that our equity method investments have evolved into a critical, integrated part of our ongoing operations. We have determined this justifies a more meaningful and transparent presentation of our proportional share of income (loss) in our equity method investments as a component of our operating income. As a result, we have reclassified our share of income (loss) in equity method investments to operating income for all periods presented.

Our share of the income (loss) from Atlantic Lithium, Sayona Mining and Sayona Quebec is recorded on a one quarter lag within "Loss from operations" in our consolidated statements of operations. Below is a summary of our equity method investments as of December 31, 2022.

Sayona Mining

We own an equity interest of approximately 14 % in Sayona Mining, an Australian company publicly listed on the ASX, and have formed a strategic partnership with Sayona Mining to explore, evaluate, develop, mine, and ultimately produce spodumene concentrate in Quebec, Canada.

Sayona Mining completed equity offerings of its shares of common stock to raise additional capital. The issuances of additional shares reduced our ownership interest in Sayona Mining. These shares were issued at a valuation greater than the carrying value of our ownership interest, which was diluted by not participating in these equity offerings. As a result, we recognized a noncash gain of \$ 29.4 million in the year ended December 31, 2022. The additional share issuances were made during Sayona Mining's fiscal year ended June 30, 2022. We recorded the cumulative gain in "Gain on dilution of equity method investments in unconsolidated affiliates" in our consolidated statements of operations. Certain portions of the gain related to prior periods which were determined by management to be immaterial.

Sayona Quebec

We own an equity interest of 25 % in Sayona Quebec for the purpose of furthering our investment and strategic partnership in Quebec, Canada with Sayona Mining. The remaining 75 % equity interest is held by Sayona Mining. Sayona Quebec holds a 100 % interest in the existing lithium mining operations of NAL, the Authier Lithium Project and the Tansim Lithium Project.

We have a long-term offtake agreement with Sayona Quebec, under which Sayona Quebec will supply Piedmont Lithium the greater of 113,000 metric tons per year or 50 % of spodumene concentrate production on a life-of-mine basis. Purchases of spodumene concentrate by Piedmont Lithium from Sayona Quebec are subject to market pricing with a price floor of \$ 500 per metric ton and a price ceiling of \$ 900 per metric ton.

In addition to spodumene mining and concentrate production, the NAL complex also includes a partially completed lithium carbonate refinery, which was developed by a prior operator of NAL. In the event Piedmont Lithium and Sayona Mining decide to jointly construct and operate a lithium conversion plant through their jointly-owned entity, Sayona Quebec, then spodumene concentrate produced from NAL would be preferentially delivered to that conversion plant upon commencement of conversion operations. Any remaining spodumene concentrate not delivered to a jointly-owned conversion plant would first be delivered to Piedmont Lithium up to Piedmont Lithium's offtake right and then to third parties. Any decision to construct jointly-owned lithium conversion capacity must be agreed by both parties.

Atlantic Lithium

We own an equity interest of approximately 9 % in Atlantic Lithium, an Australian company publicly listed on the Alternative Investment Market of the London Stock Exchange and the ASX, and have formed a strategic partnership with Atlantic Lithium to explore, evaluate, mine, develop, and ultimately produce spodumene concentrate in Ghana. We have the right to acquire a 50 % equity interest in Atlantic Lithium's Ghanaian-based lithium portfolio companies (collectively, "Atlantic Lithium Ghana"), which are wholly-owned subsidiaries of Atlantic Lithium, through current and future staged investments.

We have a long-term offtake agreement whereby Atlantic Lithium will sell 50 % of spodumene concentrate produced in Ghana for the life of the mine to Piedmont Lithium, subject to us electing to exercise our option to fund construction costs of Ewoyaa. See Note 5—*Other Assets*.

The following tables summarize the carrying amounts, including changes therein, of our equity method investments:

	Sayona Mining	Sayona Quebec	Atlantic Lithium	Total
Initial investment ⁽¹⁾	\$ 11,290,819	\$ 5,067,593	\$ —	\$ 16,358,412
Loss from equity method investments	(64,626)	—	—	(64,626)
Share of income (loss) from equity method investments included in other comprehensive income (loss)	(31,288)	—	—	(31,288)
Balance at June 30, 2021	11,194,905	5,067,593	—	16,262,498
Initial investment ⁽²⁾	—	—	15,969,503	15,969,503
Additional investments ⁽³⁾	7,423,086	20,211,235	—	27,634,321
Return of capital ⁽⁴⁾	—	—	(513,511)	(513,511)
Loss from equity method investments	(525,679)	(62,977)	(53,479)	(642,135)
Share of income (loss) from equity method investments included in other comprehensive income (loss)	164,176	—	(2,142)	162,034
Balance at December 31, 2021	18,256,488	25,215,851	15,400,371	58,872,710
Additional investments ⁽⁵⁾	1,444,855	19,617,242	—	21,062,097
Gain (loss) on dilution of equity method investments ⁽⁶⁾	29,401,727	—	(446,834)	28,954,893
Loss from equity method investments	(3,104,926)	(2,499,064)	(2,748,300)	(8,352,290)
Share of income (loss) from equity method investments included in other comprehensive income (loss)	(1,378,740)	(2,571,021)	(939,847)	(4,889,608)
Balance at December 31, 2022	\$ 44,619,404	\$ 39,763,008	\$ 11,265,390	\$ 95,647,802

(1) Initial investment includes transaction costs of \$ 212,713 for the year ended June 30, 2021.

(2) Initial investment includes transaction costs of \$ 111,071 for the six months ended December 31, 2021.

(3) Additional investment includes transaction costs of \$ 171,379 for the six months ended December 31, 2021.

(4) In December 2021, Atlantic Lithium demerged its gold business assets by exchanging them for shares in a newly formed company, Ricca Resources Limited. The shares in Ricca Resources Limited received were distributed to the shareholders of Atlantic Lithium and treated as a return of capital. (See Note 5—Other Assets).

(5) Additional investments in Sayona Quebec totaling \$ 5,683,894 have been made beginning January 1, 2023 through the date of this filing.

(6) Gain (loss) on dilution of equity method investments relates to: (i) issuances of additional shares of Sayona Mining, as discussed above, which reduced our ownership interest in Sayona Mining, and as a result, we recognized a noncash gain of \$ 29.4 million and (ii) the exercise of certain Atlantic Lithium stock options and share grants which resulted in a reduction of our ownership in Atlantic Lithium. Our ownership percentage for Sayona Mining and Atlantic Lithium may continue to be reduced by future stock issuances.

	As of December 31, 2022		
	Sayona Mining	Sayona Quebec	Atlantic Lithium
Fair value of equity investments where market values from publicly traded entities are readily available	\$ 157,271,908	Not publicly traded	\$ 24,885,000

For the year ended December 31, 2022, our interests in Sayona Mining, and Atlantic Lithium are significant as defined by the Securities and Exchange Commission's Regulation S-X Rule 1-02(w). Accordingly, as required by Regulation S-X Rule 3-09, we have included the audited financial statements of Sayona Mining and Atlantic Lithium as of and for their most recent fiscal year ended June 30, 2022, with a comparative period of 2021, as an exhibit to this Form 10-K.

The following tables present summarized financial information included in our share of income (loss) from equity method investments noted above for our significant equity investments. The balances below were compiled from information provided to us by each investee and are presented in accordance with U.S. GAAP:

Summarized financial information for the year ended and as of December 31, 2022:

	Sayona Mining	Sayona Quebec	Atlantic Lithium
Summarized statement of operations information:			
Revenue	\$ —	\$ —	\$ —
Net loss from operations	(19,274,044)	(9,996,260)	(39,801,057)
Other comprehensive income (loss), net of tax	10,424,036	179,041	(32,483)
Comprehensive loss	(8,850,008)	(9,817,219)	(39,833,540)
Summarized balance sheet information:			
Current assets	122,252,635	24,869,403	19,393,500
Non-current assets	237,656,191	147,953,912	1,074,079
Current liabilities	5,299,124	3,194,978	3,895,742
Non-current liabilities	57,987,101	88,183,972	15,612,992

Summarized financial information for the six months ended and as of December 31, 2021:

	Sayona Mining	Sayona Quebec	Atlantic Lithium
Summarized statement of operations information:			
Revenue	\$ —	\$ —	\$ —
Net loss from operations	(2,692,205)	(251,909)	(539,649)
Other comprehensive income (loss), net of tax	844,581	—	(21,619)
Comprehensive loss	(1,847,624)	(251,909)	(561,268)
Summarized balance sheet information:			
Current assets	18,302,011	712,057	24,332,412
Non-current assets	99,752,858	97,957,054	43,422,205
Current liabilities	2,071,478	917,461	3,354,029
Non-current liabilities	23,048	—	—

Summarized financial information for the year ended and as of June 30, 2021:

	Sayona Mining
Summarized statement of operations information:	
Revenue	\$ —
Net loss from operations	(324,754)
Other comprehensive income (loss), net of tax	(157,224)
Comprehensive loss	(481,979)
Summarized balance sheet information:	
Current assets	9,710,517
Non-current assets	17,718,789
Current liabilities	4,746,137
Non-current liabilities	24,285

5. OTHER ASSETS

Other current assets consisted of the following:

	December 31, 2022	December 31, 2021
Investments in equity securities	\$ 483,836	\$ 513,511
Prepaid assets and other receivables	2,128,005	2,001,091
Total other current assets	<u>\$ 2,611,841</u>	<u>\$ 2,514,602</u>

As of December 31, 2022, our investments in equity securities consisted of common shares in Ricca Resources Limited ("Ricca"), which we acquired as part of a spin-out of Ricca from Atlantic Lithium. Ricca is a private company focused on gold exploration in Africa.

Other non-current assets consisted of the following:

	December 31, 2022	December 31, 2021
Advances on exploration project	\$ 17,316,440	\$ 4,310,173
Other non-current assets	263,845	190,030
Operating lease right-of-use assets	1,293,394	60,919
Total other non-current assets	<u>\$ 18,873,679</u>	<u>\$ 4,561,122</u>

We have a strategic partnership with Atlantic Lithium that includes Atlantic Lithium Ghana. Under our partnership, we entered into a project agreement to acquire a 50 % equity interest in Atlantic Lithium Ghana as part of two phases of future staged investments by Piedmont Lithium in the Ewoyaa over an approximate period of three to four years .

We are currently in Phase 1, which allows us to acquire a 22.5 % equity interest in Atlantic Lithium Ghana by funding approximately \$ 17 million for exploration and definitive feasibility study expenses. Our future equity interest ownership related to Phase 1 is contingent upon completing a definitive feasibility study and making an election to proceed with Phase 2. Phase 2 allows us to acquire an additional 27.5 % equity interest in Atlantic Lithium Ghana upon completion of funding approximately \$ 70 million for capital costs associated with the construction of Ewoyaa. Any cost savings or cost overruns from the initial commitment for each phase will be shared equally between Piedmont Lithium and Atlantic Lithium. Upon completion of phases one and two, we will have a total equity interest of 50 % in Atlantic Lithium Ghana. Phase 1 funding costs are included in "Other non-current assets" in our consolidated balance sheets as an advance on our expected future investments in Ewoyaa.

Our maximum exposure to a loss as a result of our involvement in Ewoyaa is limited to the total funding paid by Piedmont Lithium to Atlantic Lithium. As of December 31, 2022, we did not own an equity interest in Atlantic Lithium Ghana. We have made advanced payments primarily related to Ewoyaa, totaling \$ 12.7 million and \$ 4.3 million during the twelve months ended December 31, 2022 and six months ended December 31, 2021, respectively. Additional advance payments totaling \$ 0.9 million have been made beginning January 1, 2023 through the date of this filing.

During the year ended December 31, 2022, we entered into a new lease with a term of 7 years for our corporate offices in Belmont, North Carolina. Accordingly, we recorded a right-of-use asset and lease liability of \$ 1.3 million as of the commencement date of the lease. See Note 7—Leases for further discussion.

6. LONG-TERM DEBT

We have entered into long-term debt agreements to purchase surface properties and the associated mineral rights from landowners that form part of "Mining interests" on our consolidated balance sheets. These purchases were fully or partly financed by the seller of each of the surface properties. Our long-term debt is payable in monthly installments ranging from approximately \$ 2,000 to \$ 20,000 per month on terms ranging from 2 to 5 years. Payments include an implied or stated interest rate of 10 % and are secured by the respective real property.

The outstanding balances of our long-term debt agreements were as follows:

	December 31, 2022	December 31, 2021
Current portion of long-term debt	\$ 425,187	\$ 762,189
Long-term debt, net of current portion	163,425	914,147
Total long-term debt	\$ 588,612	\$ 1,676,336

We paid interest on our long-term debt as follows:

	Year Ended December 31, 2022	Six Months Ended December 31, 2021	Years Ended June 30,	
			2021	2020
Interest paid	\$ 115,029	\$ 112,869	\$ 271,264	\$ 107,569

Scheduled payments for the principal portion of our outstanding long-term debt are as follows:

	December 31, 2022
2023	\$ 425,187
2024	148,910
2025	14,515
2026	—
Total	\$ 588,612

7. LEASES

In July 2021, the Company entered into a lease for our corporate offices in Belmont, North Carolina. The Company took occupancy of the space in August 2022. The lease has an initial term of 7 years, with an option to extend the term for an additional 6 years at then-market rental rates.

Lease presentation in our consolidated balance sheets, components of lease costs and other lease information are presented in the following table:

	December 31, 2022	December 31, 2021
Assets:		
Right-of-use assets - operating lease	\$ 1,293,394	\$ 60,919
Liabilities:		
Current	124,464	59,430
Non-current	1,176,709	—
Operating lease liabilities	<u>\$ 1,301,173</u>	<u>\$ 59,430</u>

	Year Ended December 31, 2022	Six Months Ended December 31, 2021	Years Ended June 30,	
			2021	2020
Statements of operations:				
Operating lease cost	\$ 152,617	\$ 84,228	\$ 165,456	\$ 156,456
Short-term lease cost	105,914	66,592	78,583	32,673
Sublease income	51,255	61,506	120,752	29,906
Other information:				
Right-of-use assets obtained in exchange for new operating lease liabilities	\$ 1,339,203	\$ —	\$ 14,921	\$ 391,549
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	\$ 143,349	\$ 86,356	\$ 165,817	\$ 152,251
Weighted-average remaining lease term (in months)	80	3	11	23
Weighted-average discount rate	10 %	10 %	10 %	10 %

Maturities of lease payments under non-cancellable leases are as follows:

	December 31, 2022
2023	\$ 249,060
2024	256,532
2025	264,228
2026	272,155
2027	280,320
Thereafter	485,027
Total future minimum lease payments	<u>1,807,322</u>
Interest included within lease payments	(506,149)
Total operating lease liabilities	<u>\$ 1,301,173</u>

8. EQUITY

Pursuant to the Redomiciliation, holders of Piedmont Australia's ordinary shares received one (1) CDI in Piedmont Lithium Inc. for each ordinary share held in Piedmont Australia on the Redomiciliation record date; and holders of ADSs in Piedmont Australia received one (1) share of common stock of Piedmont Lithium Inc. for each ADS held in Piedmont Australia on the Redomiciliation record date with each ADS representing 100 Piedmont Australia ordinary shares.

On the effective date of the Redomiciliation, the number of ordinary outstanding shares was reduced from 1,574,597,320 to 15,764,533 shares of common stock. All share and per share amounts in these consolidated financial statements and related notes for periods prior to the Redomiciliation have been retroactively adjusted to reflect the effect of the exchange ratio.

We are authorized to issue up to 100,000,000 shares of common stock, par value \$ 0.0001 per share, and 10,000,000 shares of preferred stock, par value \$ 0.0001 per share. We have no outstanding shares of preferred stock.

Equity Transactions During the Year Ended December 31, 2022

In March 2022, we issued 2,012,500 shares under our \$ 500 million automatic shelf registration with an issue price of \$ 65.00 per share to raise gross proceeds of \$ 130.8 million. Share issuance costs associated with the U.S. public offering totaled \$ 8.8 million and were accounted for as a reduction in the proceeds from share issuances in the consolidated balance sheets.

Equity Transactions During the Six Months Ended December 31, 2021

On September 24, 2021, we filed a \$ 500 million shelf registration statement with the SEC to provide us with capacity to publicly offer, common stock, preferred stock, warrants, debt, convertible or exchangeable securities, depository shares, or units, or any combination thereof. We may from time to time raise capital under our shelf registration statement in amounts, at prices, and on terms to be announced when and if any securities are offered. As of December 31, 2022 we have \$ 369.2 million remaining under our shelf registration statement, which expires on September 24, 2024.

Equity Transactions During the Year Ended June 30, 2021

In August 2020, we issued 1,200,000 shares at a weighted-average issue price of AUD 9.00 ⁽¹⁾. In October 2020, we issued 2,300,000 shares with a weighted-average issue price of \$ 25.00 . In March 2021, we issued 1,750,000 shares with a weighted-average issue price of \$ 70.00 . Share issuance costs associated with the Australia share placements and U.S. public offering totaled \$ 12,819,429 and were accounted for as a reduction in the proceeds from share issuances in the consolidated balance sheets.

Equity Transactions During the Year Ended June 30, 2020

In July 2019, we issued 1,450,000 shares with a weighted-average issue price of AUD 14.50 ⁽¹⁾. In June 2020, we issued 2,065,000 shares with a weighted-average issue price of \$ 6.30 . Share issuance costs associated with the Australia share placements and U.S. public offering totaled \$ 2,326,270 and were accounted for as a reduction in the proceeds from share issuances in the consolidated balance sheets.

(1) The weighted-average issue price in Australian dollars (AUD) were on share issuances that were initiated in Australian dollars and translated into U.S. dollars at historical rates.

9. STOCK-BASED COMPENSATION

Stock Incentive Plans

In March 2021, our Board adopted, in connection with the Redomiciliation, the Piedmont Lithium Inc. Stock Incentive Plan ("Incentive Plan"). The Incentive Plan authorized the grant of stock options, stock appreciation rights, restricted stock units and restricted stock, any of which may be performance-based. Our Leadership and Compensation Committee determines the exercise price for stock options and the base price of stock appreciation rights, which may not be less than the fair market value of our common stock on the date of grant. Generally, stock options or stock appreciation rights vest after three years of service and expire at the end of ten years. Performance rights awards ("PRAs") vest upon achievement of certain pre-established performance targets that are based on specified performance criteria over a performance period. As of December 31, 2022, 2,343,298 shares of common stock were available for issuance under our Incentive Plan.

We include the expense related to stock-based compensation in the same financial statement line item as cash compensation paid to the same employee. Additionally, and if applicable, we capitalize personnel expenses attributable to the development of our mine and construction of our plants, including stock-based compensation expenses. We recognize share-based award forfeitures as they occur.

Stock-based compensation related to all stock-based incentive plans is presented in the following table:

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Components of stock-based compensation:				
Stock-based compensation	\$ 4,630,345	\$ 2,003,116	\$ 1,319,372	\$ 470,939
Stock-based compensation forfeitures	(858,651)	—	—	—
Stock-based compensation, net of forfeitures	\$ 3,771,694	\$ 2,003,116	\$ 1,319,372	\$ 470,939
Presentation of stock-based compensation in the consolidated financial statements:				
Exploration and mine development costs	\$ 161,051	\$ 687,695	\$ 495,031	\$ 171,151
General and administrative expenses	3,328,914	1,315,421	824,341	299,788
Stock-based compensation expense, net of forfeitures ⁽¹⁾	3,489,965	2,003,116	1,319,372	470,939
Capitalized stock-based compensation ⁽²⁾	281,729	—	—	—
Stock-based compensation, net of forfeitures	\$ 3,771,694	\$ 2,003,116	\$ 1,319,372	\$ 470,939

(1) We did not reflect a tax benefit associated with stock-based compensation expense in the consolidated statements of operations because we had a full tax valuation allowance during these periods. As such, the table above does not reflect the tax impacts of stock-based compensation expense.

(2) These costs relate to direct labor costs associated with our Tennessee operations and Carolina Lithium projects and are included in "Property, plant and mine development, net" in our consolidated balance sheets.

Stock Option Awards

Stock options may be granted to employees, officers, non-employee directors and other service providers. Stock options granted are equal to the market value of the underlying common stock on the date of grant. We use the Black-Scholes valuation model to measure stock-based compensation expense associated with stock options as of each respective grant date. As of December 31, 2022, we had remaining unvested stock-based compensation expense of \$ 5.7 million to be recognized through December 2024.

The following assumptions were used to estimate the fair value of stock options granted during the periods presented below:

	Years Ended		
	December 31, 2022	June 30, 2021	June 30, 2020
Expected life of options (in years)	5.3 - 6.4	5.3 - 6.3	2.7 - 2.8
Risk-free interest rate	1.1 % - 3.4 %	0.9 % - 1.2 %	0.3 % - 0.5 %
Assumed volatility	50 %	50 %	70 %
Expected dividend rate	0 %	0 %	0 %

There were no stock options granted during the six months ended December 31, 2021.

Restricted Stock Unit Awards

Restricted stock units ("RSUs") are granted to employees and non-employee directors based on the market price of our common stock on the grant date and recognized as stock-based compensation expense over the vesting period, subject to the passage of time and continued service during the vesting period. In some instances, awards may vest concurrently with or following an employee's termination.

RSUs were first granted to employees and non-employee directors in May 2021.

Performance Rights Awards

The fair value of PRAs is based on the market price of our common stock on the grant date. PRAs are subject to performance conditions, which must be satisfied in order for PRAs to vest. Each performance right automatically converts into one share of common stock upon vesting of the performance right. Upon vesting of PRAs, common stock is immediately issued for no consideration. The performance right will expire if a performance condition of a performance right is not achieved by the expiry date.

A summary of activity relating to our share-based awards is reflected in the following table:

	Stock Option Awards	Weighted-Average Exercise Price (per share)	Restricted Stock Units	Weighted-Average Grant-Date Fair Value (per share)	Performance Rights Awards	Weighted-Average Grant-Date Fair Value (per share)
June 30, 2019	846,500	\$ 13.77	—	\$ —	500	\$ 5.41
Granted	259,500	16.15	—	—	75,000	4.51
Exercised or surrendered	(315,000)	7.71	—	—	(25,000)	4.51
Expired/Vested	(254,750)	17.13	—	—	(500)	5.41
June 30, 2020	536,250	16.88	—	—	50,000	5.20
Granted	135,004	35.14	36,745	64.08	10,000	6.50
Exercised or surrendered	(15,000)	12.38	—	—	—	—
Expired/Vested	(263,750)	15.97	—	—	—	—
June 30, 2021	392,504	21.16	36,745	64.08	60,000	5.42
Granted	—	—	14,532	59.17	—	—
Exercised or surrendered	(120,000)	13.93	—	—	—	—
Forfeited	—	—	—	—	(5,000)	6.50
Expired/Vested	—	—	—	—	(25,000)	5.20
December 31, 2021	272,504	24.34	51,277	59.17	30,000	5.42
Granted	194,906	55.00	28,664	54.24	49,468	54.13
Exercised or surrendered	(182,500)	14.92	(26,004)	58.33	—	—
Forfeited	(19,458)	38.74	(17,770)	66.77	(35,000)	12.20
Expired/Vested	(719)	65.00	—	—	—	—
December 31, 2022	264,733	\$ 52.23	36,167	\$ 57.12	44,468	\$ 54.27
Vested at December 31, 2022	75,231	\$ 47.30	—	—	—	—

	December 31, 2022	
	Option Shares Outstanding	Option Shares Vested
Weighted average remaining contractual term (in years)	1.04	0.72
Aggregate intrinsic value of share options	\$ —	\$ —

As of December 31, 2022, there were 44,468 unvested PRAs, which expire over the next three years . The unvested PRAs are subject to certain milestones related to construction, feasibility studies and offtake agreements.

10. EMPLOYEE BENEFIT PLAN

Our employees may participate in the Piedmont Lithium 401(k) Plan ("401(k) Plan"), a defined contribution plan which qualifies under Section 401(k) of the Internal Revenue Code. The 401(k) Plan was effective June 24, 2018. Participating employees may contribute up to 100 % of their pre-tax earnings up to the statutory limit. We recorded 401(k) matching contribution expenses of \$ 235,905 , \$ 78,214 , \$ 146,721 , and \$ 28,731 for the year ended December 31, 2022, the six months ended December 31, 2021 and the years ended June 30, 2021, and 2020, respectively.

11. EARNINGS PER SHARE

We compute basic and diluted earnings per common share by dividing net earnings by the respective weighted average number of common shares outstanding for the periods presented. Our calculation of diluted earnings per common share also includes the dilutive effects for the assumed vesting of outstanding options, RSUs and PRAs based on the treasury stock method. In computing diluted earnings per share, the average stock price for the period is used in determining the number of shares assumed to be purchased from the exercise of stock options. Diluted earnings per share excludes all dilutive potential shares if their effect is anti-dilutive.

Basic and diluted net loss per share is reflected in the following table:

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Net loss	\$ (12,974,674)	\$ (21,348,355)	\$ (19,993,848)	\$ (5,879,152)
Weighted-average number of common shares used in calculating basic and diluted earnings per share	17,517,678	15,868,521	13,551,150	8,283,567
Basic and diluted net loss per weighted-average share	\$ (0.74)	\$ (1.35)	\$ (1.48)	\$ (0.71)

Potentially dilutive shares were not included in the calculation of diluted net loss per share because their effect would have been anti-dilutive in those periods. PRAs were not included as their performance obligations had not been met. The potentially dilutive and anti-dilutive shares not included in diluted net loss per share are presented in the following table:

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Stock options	264,733	272,504	392,504	536,250
RSUs	36,167	51,277	36,745	—
PRAs	44,468	30,000	60,000	50,000
Total potentially dilutive shares	345,368	353,781	489,249	586,250

12. INCOME TAXES

Loss before income taxes and current and deferred income tax expense are composed of the following:

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Income (loss) before income taxes:				
Domestic	\$ (31,650,816)	\$ (20,656,738)	\$ (17,601,419)	\$ (5,424,724)
Foreign	21,815,406	(691,617)	(2,392,429)	(454,428)
Total	\$ (9,835,410)	\$ (21,348,355)	\$ (19,993,848)	\$ (5,879,152)

The reconciliation of the U.S. federal statutory tax rate to our effective income tax rate is as follows:

	Year Ended	Six Months Ended	Years Ended June 30,	
	December 31, 2022	December 31, 2021	2021	2020
Pre-tax loss	\$ (9,835,410)	\$ (21,348,355)	\$ (19,993,848)	\$ (5,879,152)
Benefit at statutory rate (21%)	(2,065,436)	(4,483,155)	(4,198,708)	(1,234,622)
Foreign rate differential	1,963,387	(62,246)	(22,160)	(13,801)
Non-deductible transaction costs	—	—	299,965	—
Permanent items	(162,114)	(102,837)	141,223	63,229
Foreign exchange differences	(840,469)	17,464	—	—
Branch deferred taxes	4,003,454	—	—	—
State taxes	511,370	508,600	(985,983)	(338,078)
Other adjustments	—	290,312	—	—
Change in valuation allowance	(270,928)	3,831,862	4,765,663	1,523,272
Income tax expense	\$ 3,139,264	\$ —	\$ —	\$ —

Tax expense for the year ended December 31, 2022 related entirely to foreign deferred taxes.

Deferred income tax assets and liabilities recorded in the consolidated balance sheets consisted of the following:

	December 31, 2022	December 31, 2021
Deferred tax assets		
Accrued expenditures	\$ 887,464	\$ 691,908
Exploration and mine development expenditures	167,651	7,686,371
Stock-based compensation	894,786	656,617
Tax carryforwards	21,850,937	7,993,664
Other deferred tax assets	1,432,208	177,512
Gross deferred tax assets	25,233,046	17,206,072
Valuation allowance	(17,750,955)	(17,186,537)
Deferred tax assets	7,482,091	19,535
Deferred tax liabilities		
Equity method investments	(9,440,314)	—
Other deferred tax liabilities	(922,900)	(19,535)
Deferred tax liabilities	(10,363,214)	(19,535)
Net deferred tax liability	\$ (2,881,123)	\$ —

During the year ended December 31, 2022, deferred tax liabilities increased by \$ 2.9 million. The increase was driven by the gain on dilution of equity method investments, partially offset by a \$ 3.9 million deferred tax benefit for a release in valuation allowance against certain deferred tax assets in Australia. The taxable temporary difference in equity method investments provide a source of income for realizing deferred tax assets, causing the \$ 3.9 million deferred tax benefit for a release in valuation allowance against certain deferred tax assets.

Changes in the balances of our deferred tax asset valuation allowance were as follows:

	December 31, 2022	December 31, 2021	June 30, 2021
Beginning balance	\$ 17,186,537	\$ 13,354,675	\$ 8,589,012
Charged to other accounts	835,346	—	—
Charged to income tax expense	(270,928)	3,831,862	4,765,663
Ending balance	\$ 17,750,955	\$ 17,186,537	\$ 13,354,675

Total net operating losses available were as follows:

	December 31, 2022	December 31, 2021	Begin to expire
U.S. - Federal	\$ 9,596,659	\$ 4,660,187	2037 — Indefinite
U.S. - State	742,982	712,124	2032
Australia - Federal	3,697,101	2,481,828	Indefinite
Australia - Capital	257,762	214,872	Indefinite
Total	\$ 14,294,504	\$ 8,069,011	

As of December 31, 2022 and 2021, we did not have any unrecognized tax benefits. Interest and penalties related to income tax matters are classified as a component of income tax expense. We do not anticipate any significant changes to unrecognized tax benefits over the next twelve months.

We file income tax returns in the U.S. federal jurisdiction, various state jurisdictions, and in various international jurisdictions. Our tax filings remain subject to audits by applicable tax authorities for a certain length of time following the tax year to which those filings relate. Tax years 2017 and forward generally remain open for examination for federal and state tax purposes. Tax years 2009 and forward generally remain open for examination for foreign tax purposes.

13. SEGMENT REPORTING

We report our segment information in the same way management internally organizes the business in assessing performance and making decisions regarding allocation of resources in accordance with ASC Topic 280, "Segment Reporting." We have a single reportable operating segment which operates as a single business platform. In reaching this conclusion, management considered the definition of the Chief Operating Decision Maker ("CODM"), how the business is defined by the CODM, the nature of the information provided to the CODM, how the CODM uses such information to make operating decisions, and how resources and performance are accessed. The results of operations provided to and analyzed by the CODM are at the consolidated level, and accordingly, key resource decisions and assessment of performance are performed at the consolidated level. We have a single, common management team and our cash flows are reported and reviewed at the consolidated level only with no distinct cash flows at an individual business level.

14. COMMITMENTS AND CONTINGENCIES

Legal Proceedings

We are involved from time to time in various claims, proceedings, and litigation. We establish reserves for specific legal proceedings when we determine that the likelihood of an unfavorable outcome is probable and the amount of loss can be reasonably estimated.

In July 2021, a lawsuit was filed against us in the U.S. District Court for the Eastern District of New York on behalf of a class of putative plaintiffs claiming violations of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The complaint alleged, among other things, that we made false and/or misleading statements and/or failed to make disclosure relating to proper and necessary permits. In February 2022, the Court appointed a lead plaintiff in this action, and the lead plaintiff filed an amended complaint in April 2022. On July 18, 2022, we moved to dismiss the amended complaint. On September 1, 2022, the lead plaintiff filed his Memorandum of Law in Opposition to our Motion to Dismiss. On October 7, 2022, we filed our Reply Memorandum in support of our Motion to Dismiss. The Court has yet to rule on our Motion to Dismiss. We intend to vigorously defend against these claim should the amended complaint survive. Although there can be no assurance as to the outcome, we do not believe these claims have merit. The potential monetary relief, if any, is not probable and cannot be estimated at this time, accordingly, we have not recorded a liability for this matter.

On October 14, 2021, Vincent Varbaro, a purported holder of Piedmont Australia's American Depositary Shares and the Company's equity securities, filed a shareholder derivative suit in the U.S. District Court for the Eastern District of New York, purporting to bring claims on behalf of the Company against certain of the Company's officers and directors. The complaint alleges that the defendants breached their fiduciary duties in connection with the Company's statements regarding the timing and status of government permits for Carolina Lithium in North Carolina, at various times between March 16, 2018 and July 19, 2021. No litigation demand was made to the Company in connection with this action. In December 2021, the parties agreed to a stipulation to stay the proceeding pending resolution of the motion to dismiss in the securities law matters described in the immediately preceding paragraph, and the Court ordered the case stayed. We intend to vigorously defend against these claims. Although there can be no assurance as to the outcome,

we do not believe these claims have merit. The potential monetary relief, if any, is not probable and cannot be estimated at this time; accordingly, we have not recorded a liability for this matter.

On July 5, 2022, Brad Thomascik, a purported shareholder of the Company's equity securities, filed a shareholder derivative lawsuit in the U.S. District Court for the Eastern District of New York. On behalf of the Company, the lawsuit purports to bring claims against certain of the Company's officers and directors. The complaint alleges that the defendants breached their fiduciary duties in connection with the Company's statements regarding the timing and status of government permits for Carolina Lithium in North Carolina at various times between March 16, 2018 and July 19, 2021. No litigation demand was made to the Company in connection with this action. The lawsuit focuses on the same public statements as the shareholder derivative suit described above. On September 15, 2022, the parties jointly agreed to and filed a stipulation to stay the proceeding pending resolution of the motion to dismiss in the securities law matters described in the second paragraph of this section. The Court has not yet entered the order. We intend to vigorously defend against these claims. Although there can be no assurance as to the outcome, we do not believe these claims have merit. The potential monetary relief, if any, is not probable and cannot be estimated at this time; accordingly, we have not recorded a liability for this matter.

15. RELATED PARTIES

Ledger Holdings Pty Ltd, a company associated with a former non-executive director of the Company was paid \$ 91,667 and \$ 90,734 during the years ended June 30, 2021 and 2020, respectively, for services related to business development activities. These fees and associated payments were included in the former director's remuneration. Effective June 1, 2021, the director's term ended. We have no other significant or material related party transactions during the periods presented.

16. TRANSITION PERIOD COMPARATIVE DATA

As discussed in Note 1—*Description of Company*, effective January 1, 2022, we changed our fiscal year end from June 30 to December 31. The six-month period from July 1, 2021, to December 31, 2021, served as a transition period. For comparative purposes, the consolidated statements of operations and cash flows for the six months ended December 31, 2021 and 2020, are summarized below. All data for the six months ended December 31, 2020, was derived from the Company's unaudited consolidated financial statements.

	Six Months Ended December 31,	
	2021	2020 (unaudited)
Operating expenses:		
Exploration and mine development costs	\$ 9,628,803	\$ 3,572,166
General and administrative expenses	10,956,005	2,174,023
Total operating expenses	20,584,808	5,746,189
Loss from equity investments in unconsolidated affiliates	(642,135)	—
Loss from operations	(21,226,943)	(5,746,189)
Other income (expense) :		
Interest expense, net	(112,869)	(138,801)
(Loss) gain from foreign currency exchange	(8,543)	100,152
Loss before taxes and equity earnings	(21,348,355)	(5,784,838)
Income tax expense	—	—
Net loss	\$ (21,348,355)	\$ (5,784,838)
Basic and diluted net loss per weighted-average share	\$ (1.35)	\$ (0.47)
Basic and diluted weighted-average number of shares outstanding	15,868,521	12,205,057

	Six Months Ended	
	December 31,	
	2021	2020 (unaudited)
Cash flows from operating activities:		
Net loss	\$ (21,348,355)	\$ (5,784,838)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	8,697	8,836
Stock-based compensation	2,003,116	301,077
Noncash lease expense	78,878	53,834
Loss on equity investments in unconsolidated affiliates	642,135	—
Changes in operating assets and liabilities:		
Other assets	(717,101)	(212,398)
Operating lease liabilities	(81,005)	(74,233)
Accounts payable	(1,299,090)	1,465,370
Accrued expenses and other current liabilities	3,038,552	708,543
Net cash used in operating activities	(17,674,173)	(3,533,809)
Cash flows from investing activities:		
Purchase of mining interests	(12,464,238)	(5,076,816)
Capital expenditures	(35,145)	(13,740)
Advances on the Ewoyaa Project (Ghana)	(4,310,173)	—
Purchase of equity investments in unconsolidated affiliates	(43,603,824)	—
Net cash used in investing activities	(60,413,380)	(5,090,556)
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of issuance costs	—	60,876,241
Proceeds from exercise of stock options	557,100	132,895
Principal payments on long-term debt	(876,212)	(304,865)
Net cash (used in) provided by financing activities	(319,112)	60,704,271
Net (decrease) increase in cash	(78,406,665)	52,079,906
Cash and cash equivalents at beginning of period	142,651,648	18,857,088
Cash and cash equivalents at end of period	\$ 64,244,983	\$ 70,936,994
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 112,869	\$ 156,208
Noncash acquisitions of mining interests financed by sellers	241,002	669,500

17. SUBSEQUENT EVENTS

In February 2023, we received \$ 75 million from LG Chem, Ltd ("LG Chem") in exchange for common shares in Piedmont Lithium in conjunction with a multi-year spodumene concentrate offtake agreement.

- LG Chem purchased 1,096,535 newly issued shares of Piedmont Lithium's common stock at an approximate price of \$ 68.40 per share for a total consideration of \$ 75 million; and closing of the Subscription Agreement occurred on February 24, 2023 which resulted in LG Chem holding approximately 5.7 % of Piedmont Lithium's common shares.
- The spodumene concentrate offtake agreement commits us to sell 200,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement expires four years from the date of first shipment, which is anticipated to occur by the third quarter of 2023, with the final shipment expected in the third quarter of 2027. Pricing is determined by a market-based mechanism.

In January 2023, we entered into an amended offtake agreement with Tesla, Inc. ("Tesla") to provide spodumene concentrate from NAL in Quebec. The agreement commits us to sell 125,000 metric tons of spodumene concentrate from our offtake agreement with Sayona Quebec. The term of the agreement is three years , beginning on January 2, 2023, with the start-of-production in the second half of 2023 through the end of 2025, and pricing is determined by a market-based mechanism.

EXECUTIVE EMPLOYMENT AGREEMENT

This Executive Employment Agreement (the "**Agreement**") is entered into as of December 8, 2022 (the "**Effective Date**") by and between Krishna Y. McVey ("**Executive**"), Piedmont Lithium Inc. (the "**Company**").

WHEREAS, Executive is party to that certain Employment Agreement with the Company, dated June 23, 2021 (the "**Prior Employment Agreement**"), pursuant to which Executive serves as Vice President – Chief Human Resources Officer;

WHEREAS, the Company wishes to supersede the Prior Employment Agreement and employ Executive, and Executive wishes to accept employment with the Company, as the Executive Vice President and Chief Administrative Officer of the Company, pursuant to the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, it is hereby agreed by and between the parties hereto as follows:

ARTICLE I
DEFINITIONS

For purposes of the Agreement, the following terms are defined as follows:

- 1.1. "**Board**" means the Board of Directors of the Company.
 - 1.2. "**Cause**" means any of the following: (A) the willful or negligent failure by Executive to substantially perform Executive's duties under this Agreement; (B) willful breach of fiduciary duty involving personal benefit; (C) willful breach by Executive of any of the restrictive covenants set forth in Articles V, VI or VII of this Agreement; (D) indictment or arraignment of Executive for any misdemeanor involving dishonesty or moral turpitude or any felony; or (E) any other willful conduct that is demonstrably and materially injurious to the Company, its business, or its reputation. For purposes of this definition, no act, or failure to act, on Executive's part shall be considered "willful" unless done, or omitted to be done, by Executive not in good faith and without reasonable belief that Executive's action or omission was in the best interests of the Company. Except in the case of grounds described in clause (D) above, the Executive shall not be considered to have been terminated for Cause unless the Board has first provided him with (1) written notice setting forth in reasonable detail the alleged conduct constituting grounds for Cause, (2) a reasonable opportunity to meet with the Board (which may be telephonic) and to contest such grounds with counsel of Executive's choosing, and (3) if such grounds are susceptible to cure, a period of at least 30 days within which to effect such cure, and subsequent to such meeting with the Board, a separate vote of the Board in which Executive has been determined to be guilty of such alleged conduct constituting grounds for Cause.
 - 1.3. "**Change in Control**" shall have the meaning ascribed to that term (or substantially similar term as the case may be) in the Piedmont Lithium Inc. Stock Incentive Plan (the "**Plan**") or any successor equity compensation plan of the Company.
 - 1.4. "**COBRA**" means the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended.
 - 1.5. "**Code**" means the Internal Revenue Code of 1986, as amended.
 - 1.6. "**Covered Termination**" means (i) an Involuntary Termination Without Cause or (ii) a voluntary termination for Good Reason. For the avoidance of doubt, neither (x) the termination
-

of Executive's employment as a result of Executive's death or Disability nor (y) the expiration of this Agreement due to non-renewal pursuant to the terms of Section 2.2 of this Agreement will be deemed to be a Covered Termination.

1.7. **"Disability"** means Executive's inability (as determined by an independent physician appointed by the Company and reasonably acceptable to Executive or Executive's representatives) due to accident or physical or mental illness, to adequately and fully perform the duties that Executive was performing for the Company when the disability began, with the reasonable expectation, based on the advice of such independent physician, that such inability will continue for at least 90 consecutive days, or for at least 180 nonconsecutive days during any 12-month period. Any determination made by such independent physician will be final, conclusive, and binding upon the Company, Executive, and their successors in interest.

1.8. **"Good Reason"** means any of the following taken without Executive's written consent: (i) failure or refusal by the Company to comply in any material respect with the material terms of this Agreement, (ii) a material diminution in Executive's duties, title, authority or responsibilities, (iii) a reduction in Executive's Base Salary (unless the annual base salary of all other executive officers is similarly reduced by not more than 20% based on formal Board action), or (iv) the Company requiring Executive to relocate his personal residence, provided that any request or directive from the Company to not work in such office pursuant to any stay-at-home or work from home or similar law, order, directive, request or recommendation from a governmental entity shall not give rise to Good Reason under this Agreement. Notwithstanding the foregoing, Executive's resignation shall not constitute a resignation for "Good Reason" as a result of any event described in the preceding sentence unless (x) Executive provides written notice thereof to the Company within sixty (60) days after the Executive's discovery of the first occurrence of such event, (y) to the extent correctable, the Company fails to remedy such circumstance or event within thirty (30) days following the Company's receipt of such written notice and (z) the effective date of Executive's resignation for "Good Reason" is not later than ninety (90) days after the discovery of the initial existence of the circumstances constituting Good Reason.

1.9. **"Involuntary Termination Without Cause"** means Executive's dismissal or discharge by the Company other than for Cause or by reason of Executive's death or Disability.

1.10. **"Section 409A"** means Section 409A of the Code and the Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the Effective Date.

1.11. **"Separation from Service"** means Executive's termination of employment constitutes a "separation from service" within the meaning of Treasury Regulation Section 1.409A-1(h).

ARTICLE II EMPLOYMENT BY THE COMPANY

1.1. **Position and Duties.** Subject to terms set forth herein, Executive shall serve in an executive capacity and shall perform such duties and have such authorities as are customarily associated with the position of Executive Vice President and Chief Administrative Officer of the Company and such other duties as are reasonably assigned to Executive by the Company's Chief Executive Officer and the Board within the scope of his employment with the Company. During the term of Executive's employment with the Company, Executive will devote Executive's best efforts and substantially all of Executive's business time and attention (except for vacation periods and absences due to reasonable periods of illness or other incapacities permitted by the Company's general employment policies or as otherwise set forth in this Agreement) to the business of the Company.

1.2. Term. The term of this Agreement and the Executive's employment hereunder shall commence on the Effective Date and shall terminate upon the termination of Executive's employment under this Agreement (the "**Term**").

1.3. Employment at Will. The Company shall have the right to terminate Executive's employment with the Company at any time, with or without Cause, and, in the case of a termination by the Company, with or without prior notice. In addition to Executive's right to resign for Good Reason, Executive shall have the right to resign at any time and for any reason or no reason at all, upon thirty (30) days' advance written notice to the Company; provided, however, that if Executive has provided a resignation notice to the Company, the Company may determine, in its sole discretion, that such termination shall be effective on any date prior to the effective date of termination provided in such notice (and, if such earlier date is so required, then it shall not change the basis for Executive's termination of employment nor be construed or interpreted as a termination of Executive's employment by the Company) and any requirement to continue salary or benefits shall cease as of such earlier date. Upon certain terminations of Executive's employment with the Company, Executive may become eligible to receive the severance benefits provided in Article IV of this Agreement.

1.4. Deemed Resignations. Except as otherwise determined by the Board or as otherwise agreed to in writing by Executive and the Company or any of its affiliates prior to the termination of Executive's employment with the Company or any of its affiliates, any termination of Executive's employment shall constitute, as applicable, an automatic resignation of Executive: (a) as an officer of the Company and each of its affiliates; (b) from the Board; and (c) from the board of directors or board of managers (or similar governing body) of any affiliate of the Company and from the board of directors or board of managers (or similar governing body) of any corporation, limited liability entity, unlimited liability entity or other entity in which the Company or any of its affiliates holds an equity interest and with respect to which board of directors or board of managers (or similar governing body) Executive serves as such designee or other representative of the Company or any of its affiliates. Executive agrees to take any further reasonable and customary actions that the Company or any of its affiliates reasonably requests to effectuate or document the foregoing.

1.5. Employment Policies. The employment relationship between the parties shall also be governed by the general employment policies and practices of the Company, including those relating to protection of confidential information and assignment of inventions, except that when the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

ARTICLE III COMPENSATION

1.1. Base Salary. As of January 1, 2023, Executive shall receive for services to be rendered hereunder an annualized base salary of \$375,000 (**Base Salary**"), payable on the regular payroll dates of the Company (but no less often than monthly), subject to increase in the sole discretion of the Board or a committee of the Board.

1.2. Annual Bonus. For each calendar year ending during the Term (other than the remainder of 2022), Executive shall be eligible to receive an annual performance bonus (the **Annual Bonus**) (i) targeted at fifty percent (50%) of Base (the **Target Bonus**) or such other amount as determined in the sole discretion of the Board or a committee of the Board, (ii) with a maximum Annual Bonus opportunity equal to 200% of the Target Bonus, and (iii) on such terms and conditions determined by the Board or a committee of the Board. The actual amount of any Annual Bonus (if any) will be determined in the discretion of the Board or a committee of the Board and will be (i) subject to achievement of any applicable bonus objectives and/or

conditions determined by the Board or a committee of the Board and (ii) subject to Executive's continued employment with the Company through the date the Annual Bonus is paid (except as otherwise provided in Section 4.1). The Annual Bonus for any calendar year will be paid at the same time as bonuses for other Company executives are paid related annual bonuses generally, but no later than March 15 of the calendar year following the calendar year to which the bonus relates.

1.3. Standard Company Benefits. During the Term, Executive shall be entitled to all rights and benefits for which Executive is eligible under the terms and conditions of the standard Company benefits and compensation practices that may be in effect from time to time and are provided by the Company to its executive employees generally, as well as any additional benefits provided to Executive consistent with past practice. Notwithstanding the foregoing, this Section 3.3 shall not create or be deemed to create any obligation on the part of the Company to adopt or maintain any benefits or compensation practices at any time.

1.4. Paid Time Off. During the Term, Executive shall be entitled to such periods of paid time off ("PTO") each year as provided from time to time under the Company's PTO policies and as otherwise provided for executive officers, as it may be amended from time to time, but in no event shall Executive be entitled to less than 20 days of PTO per year.

1.5. Equity Awards. Executive will be eligible to receive equity incentive grants as determined by the Board or a committee of the Board in its sole discretion. It is currently contemplated that Executive will receive an annual equity award under the Plan having a grant date fair value equal to approximately seventy-five percent (75%) of Executive's Base Salary. All equity awards granted to Executive will be subject to the terms and conditions of the Plan and the applicable award agreement approved by the Board or a committee thereof (the "Award Agreements").

ARTICLE IV SEVERANCE AND CHANGE IN CONTROL BENEFITS

1.1. Severance Benefits. Upon Executive's termination of employment, Executive shall receive any accrued but unpaid Base Salary and other accrued and unpaid compensation, including any accrued but unpaid vacation. If the termination is due to a Covered Termination, provided that Executive (A) delivers an effective general release of all claims against the Company and its affiliates in a reasonable and customary form provided by the Company to the Executive promptly upon termination, containing restrictions no greater than those set forth in this Agreement (a "Release of Claims") that becomes effective and irrevocable within sixty (60) days following the Covered Termination and (B) continues to comply with Articles V through VII of this Agreement, Executive shall be entitled to receive the severance benefits described in Section 4.1(a) or (b), as applicable.

(a) Covered Termination Not Related to a Change in Control. If Executive's employment terminates due to a Covered Termination which occurs at any time other than during the period beginning three (3) months prior to a Change in Control and ending twelve (12) months after a Change in Control (the "CIC Protection Period"), Executive shall receive the following:

(i) An amount equal to twelve (12) months of Executive's Base Salary at the rate in effect (or required to be in effect before any diminution that is the basis of Executive's termination for Good Reason) at the time of Executive's termination of employment, payable in a lump sum payment, less applicable withholdings, as soon as administratively practicable following the date on which the Release of Claims becomes effective and, in any event, no later than the sixtieth (60th) day following the date of the Covered Termination; provided, however, if

such sixty (60) day period falls in two different calendar years, payment will be made in the later calendar year.

(ii) Subject to Executive's timely election of continuation coverage under COBRA, the Company shall directly pay, or reimburse Executive for the premium for Executive and Executive's covered dependents to maintain continued health coverage pursuant to the provisions of COBRA through the earlier of (A) the twelve-month anniversary of the date of Executive's termination of employment and (B) the date Executive and Executive's covered dependents, if any, become eligible for healthcare coverage under another employer's plan(s). Notwithstanding the foregoing, if the Company is otherwise unable to continue to cover Executive under its group health plans without penalty under applicable law (including without limitation, Section 2716 of the Public Health Service Act), then, in either case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments.

(iii) **Equity Award Treatment.** Notwithstanding anything set forth in an Award Agreement or the Plan to the contrary, all equity awards granted to Executive that are outstanding and unvested as of immediately prior to Executive's termination of employment shall become immediately and fully vested as of the date of Executive's termination of employment (with performance-based awards vesting based upon the target level of performance).

(b) **Covered Termination Related to a Change in Control.** If Executive's employment terminates due to a Covered Termination that occurs during the CIC Protection Period, Executive shall receive the following:

(i) An amount equal to two (2) times the sum of (i) Executive's Base Salary at the rate in effect (or required to be in effect before any diminution that is the basis of Executive's termination for Good Reason) at the time of Executive's termination of employment and (ii) Executive's Target Bonus in effect for the year in which Executive's termination of employment occurs, payable in a lump sum payment, less applicable withholdings, as soon as administratively practicable following the date on which the Release of Claims becomes effective and, in any event, no later than the sixtieth (60th) day following the date of the Covered Termination; provided, however, if such sixty (60) day period falls in two different calendar years, payment will be made in the later calendar year.

(ii) Notwithstanding anything set forth in an award agreement or incentive plan to the contrary, (A) a pro-rata portion of Executive's Annual Bonus for the fiscal year in which Executive's termination occurs based on actual achievement of the applicable bonus objectives and/or conditions determined by the Board or a committee of the Board for such year (determined by multiplying the amount of the Annual Bonus that would be payable for the full fiscal year by a fraction, the numerator of which shall be equal to the number of days during the fiscal year of termination that Executive is employed by, and performing services for, the Company and the denominator of which is 365 days) and (B) the amount of any Annual Bonus earned, but not yet paid, for the fiscal year prior to Executive's termination, in each case, payable, less applicable withholdings, at the same time bonuses for such year are paid to other senior executives of the Company, but in no event later than March 15 of the year following the year of Executive's termination of employment.

(iii) Subject to Executive's timely election of continuation coverage under COBRA, the Company shall directly pay, or reimburse Executive for the premium for Executive and Executive's covered dependents to maintain continued health coverage pursuant to the provisions of COBRA through the earlier of (A) the twelve-month anniversary of the date of Executive's termination of employment and (B) the date Executive and Executive's covered

dependents, if any, become eligible for healthcare coverage under another employer's plan(s). Notwithstanding the foregoing, if the Company is otherwise unable to continue to cover Executive under its group health plans without penalty under applicable law (including without limitation, Section 2716 of the Public Health Service Act), then, in either case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments.

(iv) **Equity Award Treatment.** Notwithstanding anything set forth in an Award Agreement or the Plan to the contrary, all equity awards granted to Executive that are outstanding and unvested as of immediately prior to Executive's termination of employment shall become immediately and fully vested as of the date of Executive's termination of employment (with performance-based awards vesting based upon the target level of performance).

1.2. 280G Provisions. Notwithstanding anything in this Agreement to the contrary, if any payment or distribution Executive would receive pursuant to this Agreement or otherwise ("Payment") would (a) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (b) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "Excise Tax"), then such Payment shall either be (i) delivered in full, or (ii) delivered as to such lesser extent which would result in no portion of such Payment being subject to the Excise Tax, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax, results in the receipt by Executive on an after-tax basis, of the largest payment, notwithstanding that all or some portion of the Payment may be taxable under Section 4999 of the Code. The accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the Change in Control, or such other accounting firm with similar expertise as designated by the Company before the effective date of the Change in Control shall perform the foregoing calculations. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The accounting firm shall provide its calculations to the Company and Executive within fifteen (15) calendar days after the date on which Executive's right to a Payment is triggered (if requested at that time by the Company or Executive) or such other time as requested by the Company or Executive. Any good faith determinations of the accounting firm made hereunder shall be final, binding and conclusive upon the Company and Executive. Any reduction in payments and/or benefits pursuant to this Section 4.2 will occur in the following order: (1) reduction of cash payments; (2) cancellation of accelerated vesting of equity awards other than stock options; (3) cancellation of accelerated vesting of stock options; and (4) reduction of other benefits payable to Executive. Nothing in this Section 4.2 shall require the Company or any of its affiliates to be responsible for, or have any liability or obligation with respect to, Executive's excise tax liabilities under Section 4999 of the Code.

1.3. Section 409A. Notwithstanding any provision to the contrary in this Agreement:

(a) All provisions of this Agreement are intended to comply with Section 409A of the Code, and the applicable Treasury regulations and administrative guidance issued thereunder (collectively, "Section 409A") or an exemption therefrom and shall be construed and administered in accordance with such intent. Any payments under this Agreement that may be excluded from Section 409A either as separation pay due to an involuntary separation from service or as a short-term deferral shall be excluded from Section 409A to the maximum extent possible. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement are exempt from, or compliant with, Section 409A and in no event shall the Company or any of its affiliates be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by Executive on account of non-compliance with Section 409A.

(b) If Executive is deemed at the time of Executive's Separation from Service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, to the extent delayed commencement of any portion of the benefits to which Executive is entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code which would subject Executive to a tax obligation under Section 409A, such portion of Executive's benefits shall not be provided to Executive prior to the earlier of (i) the expiration of the six-month period measured from the date of Executive's Separation from Service or (ii) the date of Executive's death. Upon the expiration of the applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this Section 4.3(b) shall be paid in a lump sum to Executive, and any remaining payments due under the Agreement shall be paid as otherwise provided herein.

(c) Any reimbursements payable to Executive pursuant to the Agreement shall be paid to Executive no later than 30 days after Executive provides the Company with a written request for reimbursement, and to the extent that any such reimbursements are deemed to constitute "nonqualified deferred compensation" within the meaning of Section 409A (i) such amounts shall be paid or reimbursed to Executive promptly, but in no event later than December 31 of the year following the year in which the expense is incurred, (ii) the amount of any such payments eligible for reimbursement in one year shall not affect the payments or expenses that are eligible for payment or reimbursement in any other taxable year, and (iii) Executive's right to such payments or reimbursement shall not be subject to liquidation or exchange for any other benefit; provided, that the foregoing clause shall not be violated with regard to expenses reimbursed under any arrangement covered by Section 105(b) of the Code solely because such expenses are subject to a limit related to the period in which the arrangement is in effect..

(d) For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), Executive's right to receive installment payments under the Agreement shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment.

1.4. Mitigation. Executive shall not be required to mitigate damages or the amount of any payment provided under this Agreement by seeking other employment or otherwise, nor shall the amount of any payment provided for under this Agreement be reduced by any compensation earned by Executive as a result of employment by another employer or by any retirement benefits received by Executive after the date of the Covered Termination, or otherwise.

1.5. Equity Coordination. For the avoidance of doubt, all equity awards, including stock options, restricted stock units and other equity-based compensation granted by the Company to Executive under the Company's equity-based compensation plans shall be subject to the terms of such plans and Executive's equity award agreements with respect thereto; provided, however, that in the event of a conflict between the plans/award agreements and this Agreement in connection with a termination of Executive, the terms of this Agreement shall control and determine the resolution of such conflict.

**ARTICLE V
PROPRIETARY INFORMATION AND CONFIDENTIALITY OBLIGATIONS**

1.1. Proprietary Information. All Company Innovations shall be the sole and exclusive property of the Company without further compensation and are "works made for hire" as that term is defined under the United States copyright laws. Executive shall promptly notify the Company of any Company Innovations that Executive solely or jointly Creates. "**Company Innovations**" means all Innovations, and any associated intellectual property rights, which Executive may solely or jointly Create, during Executive's employment with the Company, which (i) relate, at the time Created, to the Company's business or actual or demonstrably anticipated research or development, or (ii) were developed on any amount of the Company's time or with the use of any of the Company's equipment, supplies, facilities or trade secret information, or (iii) resulted from any work Executive performed for the Company. "**Create**" means to create, conceive, reduce to practice, derive, develop or make. "**Innovations**" means processes, machines, manufactures, compositions of matter, improvements, inventions (whether or not protectable under patent laws), works of authorship, information fixed in any tangible medium of expression (whether or not protectable under copyright laws), mask works, trademarks, trade names, trade dress, trade secrets, know-how, ideas (whether or not protectable under trade secret laws), and other subject matter protectable under patent, copyright, moral rights, mask work, trademark, trade secret or other laws regarding proprietary rights, including new or useful art, combinations, discoveries, formulae, manufacturing techniques, technical developments, discoveries, artwork, software and designs. Executive hereby assigns (and will assign) to the Company all Company Innovations. Executive shall perform (at the Company's expense), during and after Executive's employment, all acts reasonably deemed necessary or desirable by the Company to assist the Company in obtaining and enforcing the full benefits, enjoyment, rights and title throughout the world in the Company Innovations. Such acts may include execution of documents and assistance or cooperation (i) in the filing, prosecution, registration, and memorialization of assignment of patent, copyright, mask work or other applications, (ii) in the enforcement of any applicable Proprietary Rights, and (iii) in other legal proceedings related to the Company's Innovations. "**Proprietary Rights**" means patents, copyrights, mask work, moral rights, trade secrets and other proprietary rights. No provision in this Agreement is intended to require Executive to assign or offer to assign any of Executive's rights in any invention for which Executive can establish that no trade secret information of the Company was used, and which was developed on Executive's own time, unless the invention relates to the Company's actual or demonstrably anticipated research or development, or the invention results from any work performed by Executive for the Company.

1.2. Confidentiality. In the course of Executive's employment with the Company and the performance of Executive's duties on behalf of the Company and its affiliates hereunder, Executive will be provided with, and will have access to, Confidential Information (as defined below). In consideration of Executive's receipt and access to such Confidential Information, and as a condition of Executive's employment, Executive shall comply with this Section 5.2

(a) Both during the Term and thereafter, except as expressly permitted by this Agreement, Executive shall not disclose any Confidential Information to any person or entity and shall not use any Confidential Information except for the benefit of the Company or its affiliates. Executive shall follow all Company policies and protocols regarding the security of all documents and other materials containing Confidential Information (regardless of the medium on which Confidential Information is stored). Except to the extent required for the performance of Executive's duties on behalf of the Company or any of its affiliates, Executive shall not remove from facilities of the Company or any of its affiliates any information, property, equipment, drawings, notes, reports, manuals, invention records, computer software, customer information, or other data or materials that relate in any way to the Confidential Information, whether paper or electronic and whether produced by Executive or obtained by the Company or any of its affiliates. The covenants of this Section 5.2(a) shall apply to all Confidential Information, whether now known or later to become known to Executive during the period that Executive is employed by or affiliated with the Company or any of its affiliates.

(b) Notwithstanding any provision of Section 5.2(a) to the contrary, Executive may make the following disclosures and uses of Confidential Information:

(i) disclosures to other employees, officers or directors of the Company or any of its affiliates who have a need to know or for whom it is appropriate to share the information in connection with the businesses of the Company or any of its affiliates or in connection with performance reviews of employees of the Company;

(ii) disclosures to customers and suppliers when, in the reasonable and good faith belief of Executive, such disclosure is in connection with Executive's performance of Executive's duties;

(iii) disclosures and uses that are approved in writing by the Board; or

(iv) disclosures to a person or entity that has (x) been retained by the Company or any of its affiliates to provide services to the Company and/or its affiliates and (y) agreed in writing to abide by the terms of a confidentiality agreement.

(c) Upon the expiration of the Term, and at any other time upon request of the Company, Executive shall promptly and permanently surrender and deliver to the Company all documents (including electronically stored information) and all copies thereof and all other materials of any nature containing or pertaining to all Confidential Information and any other Company property (including any Company-issued computer, mobile device or other equipment) in Executive's possession, custody or control and Executive shall not retain any such documents or other materials or property of the Company or any of its affiliates. Within ten (10) days of any such request, Executive shall certify to the Company in writing that all such documents, materials and property have been returned to the Company or otherwise destroyed.

(d) "**Confidential Information**" means all confidential, competitively valuable, non-public or proprietary information that is conceived, made, developed or acquired by or disclosed to Executive (whether conveyed orally or in writing), individually or in conjunction with others, during the period that Executive is employed or engaged by the Company or any of its affiliates (whether during business hours or otherwise and whether on the Company's premises or otherwise) including: (i) technical information of the Company, its affiliates, its investors, customers, vendors, suppliers or other third parties, including computer programs, software, databases, data, ideas, know-how, formulae, compositions, processes, discoveries, machines, inventions (whether patentable or not), designs, developmental or experimental work, techniques, improvements, work in process, research or test results, original works of authorship, training programs and procedures, diagrams, charts, business and product development plans, and similar items; (ii) information relating to the Company or any of its affiliates' businesses or properties, products or services (including all such information relating to corporate opportunities, operations, future plans, methods of doing business, business plans, strategies for developing business and market share, research, financial and sales data, pricing terms, evaluations, opinions, interpretations, acquisition prospects, the identity of customers or acquisition targets or their requirements, the identity of key contacts within customers' organizations or within the organization of acquisition prospects, or marketing and merchandising techniques, prospective names and marks) or pursuant to which the Company or any of its affiliates owes a confidentiality obligation; and (iii) other valuable, confidential information and trade secrets of the Company, its affiliates, its customers or other third parties. Moreover, all documents, videotapes, written presentations, brochures, drawings, memoranda, notes, records, files, correspondence, manuals, models, specifications, computer programs, e-mail, voice mail, electronic databases, maps, drawings, architectural renditions, models and all other writings or materials of any type including or embodying any of such information, ideas, concepts, improvements, discoveries, inventions and other similar forms of expression are and

shall be the sole and exclusive property of the Company or its other applicable affiliates and be subject to the same restrictions on disclosure applicable to all Confidential Information pursuant to this Agreement. For purposes of this Agreement, Confidential Information shall not include any information that (A) is or becomes generally available to the public other than as a result of a disclosure or wrongful act of Executive or any of Executive's agents; (B) was available to Executive on a non-confidential basis before its disclosure by the Company or any of its affiliates; (C) becomes available to Executive on a non-confidential basis from a source other than the Company or any of its affiliates; provided, however, that such source is not bound by a confidentiality agreement with, or other obligation with respect to confidentiality to, the Company or any of its affiliates; or (D) is required to be disclosed by applicable law.

(e) Notwithstanding the foregoing, nothing in this Agreement shall prohibit or restrict Executive from lawfully: (i) initiating communications directly with, cooperating with, providing information to, causing information to be provided to, or otherwise assisting in an investigation by, any governmental authority regarding a possible violation of any law; (ii) responding to any inquiry or legal process directed to Executive from any such governmental authority; (iii) testifying, participating or otherwise assisting in any action or proceeding by any such governmental authority relating to a possible violation of law; or (iv) making any other disclosures that are protected under the whistleblower provisions of any applicable law. Additionally, pursuant to the federal Defend Trade Secrets Act of 2016, an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (A) is made (1) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney and (2) solely for the purpose of reporting or investigating a suspected violation of law; (B) is made to the individual's attorney in relation to a lawsuit for retaliation against the individual for reporting a suspected violation of law; or (C) is made in a complaint or other document filed in a lawsuit or proceeding, if such filing is made under seal. Nothing in this Agreement requires Executive to obtain prior authorization before engaging in any conduct described in this paragraph, or to notify the Company that Executive has engaged in any such conduct.

1.3. Mutual Nondisparagement. Subject to Section 5.2(e) above, Executive agrees that from and after the Effective Date, Executive will not, directly or indirectly, make, publish, or communicate any disparaging or defamatory comments regarding the Company, or any of its respective current or former directors, officers, members, managers, partners, or executives. The Company agrees that it will counsel its senior officers and directors to not make, publish, or communicate any disparaging or defamatory comments regarding Executive. The foregoing shall not be violated by truthful statements in response to legal process, required governmental testimony or filings or administrative or arbitral proceedings (including, without limitation, depositions in connection with such proceedings), and the foregoing limitation on the Company's senior executives and directors shall not be violated by statements that they in good faith believe are necessary or appropriate to make in connection with performing their duties and obligations to the Company or any of its affiliates.

1.4. Remedies. Executive's and the Company's duties under this Article V shall survive termination of Executive's employment with the Company and the termination of this Agreement. Because of the difficulty of measuring economic losses to the Company and its affiliates as a result of a breach or threatened breach of the covenants set forth in this Article V, Section 6.2 and Article VII, and because of the immediate and irreparable damage that would be caused to the Company and its affiliates for which they would have no other adequate remedy, Executive acknowledges that a remedy at law for any breach or threatened breach by Executive of Article V, as well as Executive's obligations pursuant to Section 6.2 and Article VII below, would be inadequate, and Executive therefore agrees that the Company shall be entitled to seek injunctive relief in case of any such breach or threatened breach from any court of competent jurisdiction, without the necessity of showing any actual damages or that money damages would

not afford an adequate remedy, and without the necessity of posting any bond or other security. The aforementioned equitable relief shall not be the Company's or any of its affiliates' exclusive remedy for a breach but instead shall be in addition to all other rights and remedies available to the Company and each of its affiliates at law and equity.

1.5. Modification. The covenants in this Article V, Section 6.2 and Article VII, and each provision and portion hereof, are severable and separate, and the unenforceability of any specific covenant (or portion thereof) shall not affect the provisions of any other covenant (or portion thereof). If it is determined by an arbitrator or a court of competent jurisdiction in any state that any restriction in this Article V, Section 6.2 and Article VII is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the arbitrator or the court to render it enforceable to the maximum extent permitted by the law of that state.

ARTICLE VI OUTSIDE ACTIVITIES

1.1. Other Activities.

(a) Except as otherwise provided in Section 6.1(b), Executive shall not, during the term of this Agreement undertake or engage in any other employment, occupation or business enterprise, other than ones in which Executive is a passive investor, unless Executive obtains the prior written consent of the Chief Executive Officer; provided, however, that Executive shall be permitted to manage personal investments to the extent such investments do not otherwise breach the Company's policies or the terms and conditions of this Agreement or any other agreement between the Executive and the Company.

(b) Executive may engage in civic and not-for-profit activities so long as such activities do not materially interfere with the performance of Executive's duties hereunder.

1.2. Competition/Investments. During the term of Executive's employment by the Company, Executive shall not (except on behalf of the Company) directly or indirectly, whether as an officer, director, stockholder, partner, proprietor, associate, representative, consultant, or in any capacity whatsoever engage in, become financially interested in, be employed by or have any business connection with any other person, corporation, firm, partnership or other entity whatsoever which are known by Executive to compete directly with the Company or any of its affiliates, throughout the world, in any line of business engaged in (or planned to be engaged in) by the Company; provided, however, that anything above to the contrary notwithstanding, Executive may own, as a passive investor, securities of any competitor corporation, so long as Executive's direct holdings in any one such corporation do not, in the aggregate, constitute more than 3% of the voting stock of such corporation. In addition, during the term of Executive's employment by the Company and for the one (1) year period thereafter, in order to protect the Company's legitimate business interests, including the value of the Company's confidential information, trade secrets, goodwill and training, which Executive acknowledges and agrees Executive has received and will continue to receive, Executive shall not (except on behalf of the Company) directly or indirectly, whether as an officer, director, stockholder, partner, proprietor, associate, representative, consultant, or in any capacity whatsoever engage in, become financially interested in, be employed by or have any business connection with any other person, corporation, firm, partnership or other entity whatsoever which is known by Executive to (a) contact, deal with or otherwise be involved in any transaction(s) or agreement(s) relating to any lithium mineral, mining or other related rights of the Company and its affiliates in the geographic area commonly referred to as the "Carolina Tin-Spodumene Belt" (collectively, the "**Non-Compete Area**"); or (b) take any action to circumvent or usurp any right, property or interest associated with or beneficial to the reasonable development and operation of the assets of the

Company and its affiliates within the Non-Compete Area. If it is determined by a court of competent jurisdiction in any state that any restriction in this Section 6.2 is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the law of that state.

1.3. Defense of Claims; Cooperation. During the Term and thereafter, upon reasonable request from the Company, Executive shall use commercially reasonable efforts to cooperate with the Company and its affiliates in the defense of any claims or actions that may be made by or against the Company or any of its affiliates that relate to Executive's actual or prior areas of responsibility or knowledge. Executive shall further use commercially reasonable efforts to provide reasonable and timely cooperation in connection with any actual or threatened claim, action, inquiry, review, investigation, process, or other matter (whether conducted by or before any court, arbitrator, regulatory, or governmental entity, or by or on behalf of the Company or any of its affiliates), that relates to Executive's actual or prior areas of responsibility or knowledge.

ARTICLE VII NONINTERFERENCE

Executive shall not, during the term of Executive's employment by the Company and, solely with respect to clause (ii) below, for twelve (12) months thereafter, either on Executive's own account or jointly with or as a manager, agent, officer, employee, consultant, partner, joint venturer, owner or stockholder or otherwise on behalf of any other person, firm or corporation, directly or indirectly solicit, induce attempt to solicit any of (i) its customers or clients to terminate their relationship with the Company or to cease purchasing services or products from the Company or (ii) its officers or employees or offer employment to any person who is an officer or employee of the Company; *provided, however*, that a general advertisement to which an employee of the Company responds shall in no event be deemed to result in a breach of this Article VII. If it is determined by a court of competent jurisdiction in any state that any restriction in this Article VII is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the law of that state.

ARTICLE VIII GENERAL PROVISIONS

1.1. Notices. Any notices provided hereunder must be in writing and shall be deemed effective upon the earlier of personal delivery (including personal delivery by facsimile or electronic mail) or the third day after mailing by first class mail, to the Company at its primary office location and to Executive at Executive's address as listed on the Company's books and records.

1.2. Tax Withholding. Executive acknowledges that all amounts and benefits payable under this Agreement are subject to deduction and withholding to the extent required by applicable law.

1.3. Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

1.4. Clawback. Amounts paid or payable under this Agreement shall be subject to the provisions of any applicable clawback policies or procedures adopted by the Company or any of its affiliates applicable to Executive, which clawback policies or procedures may provide for forfeiture and/or recoupment of amounts paid or payable under this Agreement. Notwithstanding any provision of this Agreement to the contrary, the Company and each of its affiliates reserves the right, without the consent of Executive, to adopt any such clawback policies and procedures, including such policies and procedures applicable to this Agreement with retroactive effect.

1.5. Waiver. Any waiver of this Agreement must be executed by the party to be bound by such waiver. If either party should waive any breach of any provisions of this Agreement, they shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement or any similar or dissimilar provision or condition at the same or any subsequent time. The failure of either party hereto to take any action by reason of any breach will not deprive such party of the right to take action at any time.

1.6. Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company and is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter, and will supersede all prior agreements, understandings, discussions, negotiations and undertakings, whether written or oral, between the parties with respect to the subject matter hereof, including, but not limited to, the Prior Employment Agreement, which shall be terminated and of no further force or effect following the Effective Date. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein or therein, and cannot be modified or amended except in a writing signed by a duly-authorized officer of the Company and Executive.

1.7. Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

1.8. Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

1.9. Successors and Assigns. This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign Executive's rights or delegate Executive's duties or obligations hereunder without the prior written consent of the Company.

1.10. Effect of Termination. The provisions of Section 2.4 and Articles IV, V, VII and VIII and those provisions necessary to interpret and enforce them, shall survive any termination of this Agreement and any termination of the employment relationship between Executive and the Company.

1.11. Third-Party Beneficiaries. Each affiliate of the Company that is not a signatory to this Agreement shall be a third-party beneficiary of Executive's obligations under Sections 2.4 and 8.14 and Articles V, VI and VII and shall be entitled to enforce such obligations as if a party hereto.

1.12. Executive Acknowledgement. Executive acknowledges and agrees that (a) Executive was represented by counsel in connection with the negotiation of this Agreement, and (b) that Executive has read and understands the Agreement, is fully aware of its legal effect, and has entered into it freely based on Executive's own judgment.

1.13. Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of North Carolina without regard to the conflicts of law provisions thereof. With respect to any claim or dispute related to or arising under this Agreement, the parties hereby consent to the arbitration provisions of Section 8.14 and recognize and agree that should any resort to a court be necessary and permitted under this Agreement, then they consent to the exclusive jurisdiction, forum and venue of the state and federal courts (as applicable) located in North Carolina.

1.14. Jurisdiction. The parties agree that any suit, action or proceeding seeking to enforce any provision of, or based on any matter arising out of or in connection with, this Agreement or the transactions contemplated hereby, whether in contract, tort or otherwise, must be brought in the United States District Court for the Western District of North Carolina or in the courts of the State of North Carolina located in Charlotte, North Carolina, so long as one of such courts has subject matter jurisdiction over such suit, action or proceeding. Any cause of action arising out of this Agreement is deemed to have arisen from a transaction of business in the State of North Carolina. Each of the parties irrevocably consents to the personal jurisdiction of such courts (and the appropriate appellate courts therefrom) in any such suit, action or proceeding and irrevocably waives, to the fullest extent permitted by law, any objection that it may now or hereafter have to the laying of the venue of any such suit, action or proceeding in any such court or that any such suit, action or proceeding which is brought in any such court has been brought in an inconvenient form. Process in any such suit, action or proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court.

[Signature page follows]

In Witness Whereof, the parties have executed this Agreement as of the date first written above.

PIEDMONT LITHIUM INC.

By: /s/ Keith Phillips
Keith Phillips

Title: Chief Executive Officer

PIEDMONT LITHIUM CAROLINAS, INC.

By: /s/ Keith Phillips
Keith Phillips

Title: Chief Executive Officer

Accepted and Agreed:

/s/ Krishna McVey
Krishna Y. McVey

[Signature page to Executive Employment Agreement for Krishna Y. McVey]

EXECUTIVE EMPLOYMENT AGREEMENT

This Executive Employment Agreement (the "**Agreement**") is entered into as of December 8, 2022 (the "**Effective Date**") by and between Austin D. Devaney ("**Executive**"), Piedmont Lithium Inc. (the "**Company**").

WHEREAS, Executive is party to that certain Employment Agreement with Piedmont Lithium Limited, an Australian company and a wholly-owned subsidiary of the Company, dated June 23, 2021 (the "**Prior Employment Agreement**"), pursuant to which Executive serves as Senior Vice President – Chief Commercial Officer of the Company;

WHEREAS, the Company wishes to supersede the Prior Employment Agreement and employ Executive, and Executive wishes to accept employment with the Company, as the Executive Vice President and Chief Commercial Officer of the Company, pursuant to the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, it is hereby agreed by and between the parties hereto as follows:

**ARTICLE I
DEFINITIONS**

For purposes of the Agreement, the following terms are defined as follows:

- 1.1. "**Board**" means the Board of Directors of the Company.
 - 1.2. "**Cause**" means any of the following: (A) the willful or negligent failure by Executive to substantially perform Executive's duties under this Agreement; (B) willful breach of fiduciary duty involving personal benefit; (C) willful breach by Executive of any of the restrictive covenants set forth in Articles V, VI or VII of this Agreement; (D) indictment or arraignment of Executive for any misdemeanor involving dishonesty or moral turpitude or any felony; or (E) any other willful conduct that is demonstrably and materially injurious to the Company, its business, or its reputation. For purposes of this definition, no act, or failure to act, on Executive's part shall be considered "willful" unless done, or omitted to be done, by Executive not in good faith and without reasonable belief that Executive's action or omission was in the best interests of the Company. Except in the case of grounds described in clause (D) above, the Executive shall not be considered to have been terminated for Cause unless the Board has first provided him with (1) written notice setting forth in reasonable detail the alleged conduct constituting grounds for Cause, (2) a reasonable opportunity to meet with the Board (which may be telephonic) and to contest such grounds with counsel of Executive's choosing, and (3) if such grounds are susceptible to cure, a period of at least 30 days within which to effect such cure, and subsequent to such meeting with the Board, a separate vote of the Board in which Executive has been determined to be guilty of such alleged conduct constituting grounds for Cause.
 - 1.3. "**Change in Control**" shall have the meaning ascribed to that term (or substantially similar term as the case may be) in the Piedmont Lithium Inc. Stock Incentive Plan (the "**Plan**") or any successor equity compensation plan of the Company.
 - 1.4. "**COBRA**" means the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended.
 - 1.5. "**Code**" means the Internal Revenue Code of 1986, as amended.
-

1.6. **"Covered Termination"** means (i) an Involuntary Termination Without Cause or (ii) a voluntary termination for Good Reason. For the avoidance of doubt, neither (x) the termination of Executive's employment as a result of Executive's death or Disability nor (y) the expiration of this Agreement due to non-renewal pursuant to the terms of Section 2.2 of this Agreement will be deemed to be a Covered Termination.

1.7. **"Disability"** means Executive's inability (as determined by an independent physician appointed by the Company and reasonably acceptable to Executive or Executive's representatives) due to accident or physical or mental illness, to adequately and fully perform the duties that Executive was performing for the Company when the disability began, with the reasonable expectation, based on the advice of such independent physician, that such inability will continue for at least 90 consecutive days, or for at least 180 nonconsecutive days during any 12-month period. Any determination made by such independent physician will be final, conclusive, and binding upon the Company, Executive, and their successors in interest.

1.8. **"Good Reason"** means any of the following taken without Executive's written consent: (i) failure or refusal by the Company to comply in any material respect with the material terms of this Agreement, (ii) a material diminution in Executive's duties, title, authority or responsibilities, (iii) a reduction in Executive's Base Salary (unless the annual base salary of all other executive officers is similarly reduced by not more than 20% based on formal Board action), or (iv) the Company requiring Executive to relocate his personal residence, provided that any request or directive from the Company to not work in such office pursuant to any stay-at-home or work from home or similar law, order, directive, request or recommendation from a governmental entity shall not give rise to Good Reason under this Agreement. Notwithstanding the foregoing, Executive's resignation shall not constitute a resignation for "Good Reason" as a result of any event described in the preceding sentence unless (x) Executive provides written notice thereof to the Company within sixty (60) days after the Executive's discovery of the first occurrence of such event, (y) to the extent correctable, the Company fails to remedy such circumstance or event within thirty (30) days following the Company's receipt of such written notice and (z) the effective date of Executive's resignation for "Good Reason" is not later than ninety (90) days after the discovery of the initial existence of the circumstances constituting Good Reason.

1.9. **"Involuntary Termination Without Cause"** means Executive's dismissal or discharge by the Company other than for Cause or by reason of Executive's death or Disability.

1.10. **"Section 409A"** means Section 409A of the Code and the Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the Effective Date.

1.11. **"Separation from Service"** means Executive's termination of employment constitutes a "separation from service" within the meaning of Treasury Regulation Section 1.409A-1(h).

ARTICLE II EMPLOYMENT BY THE COMPANY

1.1. **Position and Duties.** Subject to terms set forth herein, Executive shall serve in an executive capacity and shall perform such duties and have such authorities as are customarily associated with the position of Executive Vice President and Chief Commercial Officer of the Company and such other duties as are reasonably assigned to Executive by the Company's Chief Executive Officer and the Board within the scope of his employment with the Company. During the term of Executive's employment with the Company, Executive will devote Executive's best efforts and substantially all of Executive's business time and attention (except for vacation periods and absences due to reasonable periods of illness or other incapacities permitted by the

Company's general employment policies or as otherwise set forth in this Agreement) to the business of the Company.

1.2. Term. The term of this Agreement and the Executive's employment hereunder shall commence on the Effective Date and shall terminate upon the termination of Executive's employment under this Agreement (the "**Term**").

1.3. Employment at Will. The Company shall have the right to terminate Executive's employment with the Company at any time, with or without Cause, and, in the case of a termination by the Company, with or without prior notice. In addition to Executive's right to resign for Good Reason, Executive shall have the right to resign at any time and for any reason or no reason at all, upon thirty (30) days' advance written notice to the Company; provided, however, that if Executive has provided a resignation notice to the Company, the Company may determine, in its sole discretion, that such termination shall be effective on any date prior to the effective date of termination provided in such notice (and, if such earlier date is so required, then it shall not change the basis for Executive's termination of employment nor be construed or interpreted as a termination of Executive's employment by the Company) and any requirement to continue salary or benefits shall cease as of such earlier date. Upon certain terminations of Executive's employment with the Company, Executive may become eligible to receive the severance benefits provided in Article IV of this Agreement.

1.4. Deemed Resignations. Except as otherwise determined by the Board or as otherwise agreed to in writing by Executive and the Company or any of its affiliates prior to the termination of Executive's employment with the Company or any of its affiliates, any termination of Executive's employment shall constitute, as applicable, an automatic resignation of Executive: (a) as an officer of the Company and each of its affiliates; (b) from the Board; and (c) from the board of directors or board of managers (or similar governing body) of any affiliate of the Company and from the board of directors or board of managers (or similar governing body) of any corporation, limited liability entity, unlimited liability entity or other entity in which the Company or any of its affiliates holds an equity interest and with respect to which board of directors or board of managers (or similar governing body) Executive serves as such designee or other representative of the Company or any of its affiliates. Executive agrees to take any further reasonable and customary actions that the Company or any of its affiliates reasonably requests to effectuate or document the foregoing.

1.5. Employment Policies. The employment relationship between the parties shall also be governed by the general employment policies and practices of the Company, including those relating to protection of confidential information and assignment of inventions, except that when the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

ARTICLE III COMPENSATION

1.1. Base Salary. As of January 1, 2023, Executive shall receive for services to be rendered hereunder an annualized base salary of \$375,000 ("**Base Salary**"), payable on the regular payroll dates of the Company (but no less often than monthly), subject to increase in the sole discretion of the Board or a committee of the Board.

1.2. Annual Bonus. For each calendar year ending during the Term (other than the remainder of 2022), Executive shall be eligible to receive an annual performance bonus (the "**Annual Bonus**") (i) targeted at fifty percent (50%) of Base (the "**Target Bonus**") or such other amount as determined in the sole discretion of the Board or a committee of the Board, (ii) with a maximum Annual Bonus opportunity equal to 200% of the Target Bonus, and (iii) on such terms

and conditions determined by the Board or a committee of the Board. The actual amount of any Annual Bonus (if any) will be determined in the discretion of the Board or a committee of the Board and will be (i) subject to achievement of any applicable bonus objectives and/or conditions determined by the Board or a committee of the Board and (ii) subject to Executive's continued employment with the Company through the date the Annual Bonus is paid (except as otherwise provided in Section 4.1). The Annual Bonus for any calendar year will be paid at the same time as bonuses for other Company executives are paid related annual bonuses generally, but no later than March 15 of the calendar year following the calendar year to which the bonus relates.

1.3. Standard Company Benefits. During the Term, Executive shall be entitled to all rights and benefits for which Executive is eligible under the terms and conditions of the standard Company benefits and compensation practices that may be in effect from time to time and are provided by the Company to its executive employees generally, as well as any additional benefits provided to Executive consistent with past practice. Notwithstanding the foregoing, this Section 3.3 shall not create or be deemed to create any obligation on the part of the Company to adopt or maintain any benefits or compensation practices at any time.

1.4. Paid Time Off. During the Term, Executive shall be entitled to such periods of paid time off ("PTO") each year as provided from time to time under the Company's PTO policies and as otherwise provided for executive officers, as it may be amended from time to time, but in no event shall Executive be entitled to less than 20 days of PTO per year.

1.5. Equity Awards. Executive will be eligible to receive equity incentive grants as determined by the Board or a committee of the Board in its sole discretion. It is currently contemplated that Executive will receive an annual equity award under the Plan having a grant date fair value equal to approximately seventy-five percent (75%) of Executive's Base Salary. All equity awards granted to Executive will be subject to the terms and conditions of the Plan and the applicable award agreement approved by the Board or a committee thereof (the "**Award Agreements**").

ARTICLE IV SEVERANCE AND CHANGE IN CONTROL BENEFITS

1.1. Severance Benefits. Upon Executive's termination of employment, Executive shall receive any accrued but unpaid Base Salary and other accrued and unpaid compensation, including any accrued but unpaid vacation. If the termination is due to a Covered Termination, provided that Executive (A) delivers an effective general release of all claims against the Company and its affiliates in a reasonable and customary form provided by the Company to the Executive promptly upon termination, containing restrictions no greater than those set forth in this Agreement (a "**Release of Claims**") that becomes effective and irrevocable within sixty (60) days following the Covered Termination and (B) continues to comply with Articles V through VII of this Agreement, Executive shall be entitled to receive the severance benefits described in Section 4.1(a) or (b), as applicable.

(a) Covered Termination Not Related to a Change in Control. If Executive's employment terminates due to a Covered Termination which occurs at any time other than during the period beginning three (3) months prior to a Change in Control and ending twelve (12) months after a Change in Control (the "**CIC Protection Period**"), Executive shall receive the following:

(i) An amount equal to twelve (12) months of Executive's Base Salary at the rate in effect (or required to be in effect before any diminution that is the basis of Executive's termination for Good Reason) at the time of Executive's termination of employment, payable in

a lump sum payment, less applicable withholdings, as soon as administratively practicable following the date on which the Release of Claims becomes effective and, in any event, no later than the sixtieth (60th) day following the date of the Covered Termination; provided, however, if such sixty (60) day period falls in two different calendar years, payment will be made in the later calendar year.

(ii) Subject to Executive's timely election of continuation coverage under COBRA, the Company shall directly pay, or reimburse Executive for the premium for Executive and Executive's covered dependents to maintain continued health coverage pursuant to the provisions of COBRA through the earlier of (A) the twelve-month anniversary of the date of Executive's termination of employment and (B) the date Executive and Executive's covered dependents, if any, become eligible for healthcare coverage under another employer's plan(s). Notwithstanding the foregoing, if the Company is otherwise unable to continue to cover Executive under its group health plans without penalty under applicable law (including without limitation, Section 2716 of the Public Health Service Act), then, in either case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments.

(iii) **Equity Award Treatment.** Notwithstanding anything set forth in an Award Agreement or the Plan to the contrary, all equity awards granted to Executive that are outstanding and unvested as of immediately prior to Executive's termination of employment shall become immediately and fully vested as of the date of Executive's termination of employment (with performance-based awards vesting based upon the target level of performance).

(b) **Covered Termination Related to a Change in Control.** If Executive's employment terminates due to a Covered Termination that occurs during the CIC Protection Period, Executive shall receive the following:

(i) An amount equal to two (2) times the sum of (i) Executive's Base Salary at the rate in effect (or required to be in effect before any diminution that is the basis of Executive's termination for Good Reason) at the time of Executive's termination of employment and (ii) Executive's Target Bonus in effect for the year in which Executive's termination of employment occurs, payable in a lump sum payment, less applicable withholdings, as soon as administratively practicable following the date on which the Release of Claims becomes effective and, in any event, no later than the sixtieth (60th) day following the date of the Covered Termination; provided, however, if such sixty (60) day period falls in two different calendar years, payment will be made in the later calendar year.

(ii) Notwithstanding anything set forth in an award agreement or incentive plan to the contrary, (A) a pro-rata portion of Executive's Annual Bonus for the fiscal year in which Executive's termination occurs based on actual achievement of the applicable bonus objectives and/or conditions determined by the Board or a committee of the Board for such year (determined by multiplying the amount of the Annual Bonus that would be payable for the full fiscal year by a fraction, the numerator of which shall be equal to the number of days during the fiscal year of termination that Executive is employed by, and performing services for, the Company and the denominator of which is 365 days) and (B) the amount of any Annual Bonus earned, but not yet paid, for the fiscal year prior to Executive's termination, in each case, payable, less applicable withholdings, at the same time bonuses for such year are paid to other senior executives of the Company, but in no event later than March 15 of the year following the year of Executive's termination of employment.

(iii) Subject to Executive's timely election of continuation coverage under COBRA, the Company shall directly pay, or reimburse Executive for the premium for Executive

and Executive's covered dependents to maintain continued health coverage pursuant to the provisions of COBRA through the earlier of (A) the twelve-month anniversary of the date of Executive's termination of employment and (B) the date Executive and Executive's covered dependents, if any, become eligible for healthcare coverage under another employer's plan(s). Notwithstanding the foregoing, if the Company is otherwise unable to continue to cover Executive under its group health plans without penalty under applicable law (including without limitation, Section 2716 of the Public Health Service Act), then, in either case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments.

(iv) **Equity Award Treatment.** Notwithstanding anything set forth in an Award Agreement or the Plan to the contrary, all equity awards granted to Executive that are outstanding and unvested as of immediately prior to Executive's termination of employment shall become immediately and fully vested as of the date of Executive's termination of employment (with performance-based awards vesting based upon the target level of performance).

1.2. 280G Provisions. Notwithstanding anything in this Agreement to the contrary, if any payment or distribution Executive would receive pursuant to this Agreement or otherwise (**Payment**) would (a) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (b) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "**Excise Tax**"), then such Payment shall either be (i) delivered in full, or (ii) delivered as to such lesser extent which would result in no portion of such Payment being subject to the Excise Tax, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax, results in the receipt by Executive on an after-tax basis, of the largest payment, notwithstanding that all or some portion of the Payment may be taxable under Section 4999 of the Code. The accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the Change in Control, or such other accounting firm with similar expertise as designated by the Company before the effective date of the Change in Control shall perform the foregoing calculations. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The accounting firm shall provide its calculations to the Company and Executive within fifteen (15) calendar days after the date on which Executive's right to a Payment is triggered (if requested at that time by the Company or Executive) or such other time as requested by the Company or Executive. Any good faith determinations of the accounting firm made hereunder shall be final, binding and conclusive upon the Company and Executive. Any reduction in payments and/or benefits pursuant to this Section 4.2 will occur in the following order: (1) reduction of cash payments; (2) cancellation of accelerated vesting of equity awards other than stock options; (3) cancellation of accelerated vesting of stock options; and (4) reduction of other benefits payable to Executive. Nothing in this Section 4.2 shall require the Company or any of its affiliates to be responsible for, or have any liability or obligation with respect to, Executive's excise tax liabilities under Section 4999 of the Code.

1.3. Section 409A. Notwithstanding any provision to the contrary in this Agreement:

(a) All provisions of this Agreement are intended to comply with Section 409A of the Code, and the applicable Treasury regulations and administrative guidance issued thereunder (collectively, "**Section 409A**") or an exemption therefrom and shall be construed and administered in accordance with such intent. Any payments under this Agreement that may be excluded from Section 409A either as separation pay due to an involuntary separation from service or as a short-term deferral shall be excluded from Section 409A to the maximum extent possible. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement are exempt from, or compliant with, Section 409A and in no event shall the Company or any of its affiliates be liable for all or any

portion of any taxes, penalties, interest or other expenses that may be incurred by Executive on account of non-compliance with Section 409A.

(b) If Executive is deemed at the time of Executive's Separation from Service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, to the extent delayed commencement of any portion of the benefits to which Executive is entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code which would subject Executive to a tax obligation under Section 409A, such portion of Executive's benefits shall not be provided to Executive prior to the earlier of (i) the expiration of the six-month period measured from the date of Executive's Separation from Service or (ii) the date of Executive's death. Upon the expiration of the applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this Section 4.3(b) shall be paid in a lump sum to Executive, and any remaining payments due under the Agreement shall be paid as otherwise provided herein.

(c) Any reimbursements payable to Executive pursuant to the Agreement shall be paid to Executive no later than 30 days after Executive provides the Company with a written request for reimbursement, and to the extent that any such reimbursements are deemed to constitute "nonqualified deferred compensation" within the meaning of Section 409A (i) such amounts shall be paid or reimbursed to Executive promptly, but in no event later than December 31 of the year following the year in which the expense is incurred, (ii) the amount of any such payments eligible for reimbursement in one year shall not affect the payments or expenses that are eligible for payment or reimbursement in any other taxable year, and (iii) Executive's right to such payments or reimbursement shall not be subject to liquidation or exchange for any other benefit; provided, that the foregoing clause shall not be violated with regard to expenses reimbursed under any arrangement covered by Section 105(b) of the Code solely because such expenses are subject to a limit related to the period in which the arrangement is in effect..

(d) For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), Executive's right to receive installment payments under the Agreement shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment.

1.4. Mitigation. Executive shall not be required to mitigate damages or the amount of any payment provided under this Agreement by seeking other employment or otherwise, nor shall the amount of any payment provided for under this Agreement be reduced by any compensation earned by Executive as a result of employment by another employer or by any retirement benefits received by Executive after the date of the Covered Termination, or otherwise.

1.5. Equity Coordination. For the avoidance of doubt, all equity awards, including stock options, restricted stock units and other equity-based compensation granted by the Company to Executive under the Company's equity-based compensation plans shall be subject to the terms of such plans and Executive's equity award agreements with respect thereto; provided, however, that in the event of a conflict between the plans/award agreements and this Agreement in connection with a termination of Executive, the terms of this Agreement shall control and determine the resolution of such conflict.

ARTICLE V
PROPRIETARY INFORMATION AND CONFIDENTIALITY OBLIGATIONS

1.1. Proprietary Information. All Company Innovations shall be the sole and exclusive property of the Company without further compensation and are "works made for hire" as that term is defined under the United States copyright laws. Executive shall promptly notify the Company of any Company Innovations that Executive solely or jointly Creates. "**Company Innovations**" means all Innovations, and any associated intellectual property rights, which Executive may solely or jointly Create, during Executive's employment with the Company, which (i) relate, at the time Created, to the Company's business or actual or demonstrably anticipated research or development, or (ii) were developed on any amount of the Company's time or with the use of any of the Company's equipment, supplies, facilities or trade secret information, or (iii) resulted from any work Executive performed for the Company. "**Create**" means to create, conceive, reduce to practice, derive, develop or make. "**Innovations**" means processes, machines, manufactures, compositions of matter, improvements, inventions (whether or not protectable under patent laws), works of authorship, information fixed in any tangible medium of expression (whether or not protectable under copyright laws), mask works, trademarks, trade names, trade dress, trade secrets, know-how, ideas (whether or not protectable under trade secret laws), and other subject matter protectable under patent, copyright, moral rights, mask work, trademark, trade secret or other laws regarding proprietary rights, including new or useful art, combinations, discoveries, formulae, manufacturing techniques, technical developments, discoveries, artwork, software and designs. Executive hereby assigns (and will assign) to the Company all Company Innovations. Executive shall perform (at the Company's expense), during and after Executive's employment, all acts reasonably deemed necessary or desirable by the Company to assist the Company in obtaining and enforcing the full benefits, enjoyment, rights and title throughout the world in the Company Innovations. Such acts may include execution of documents and assistance or cooperation (i) in the filing, prosecution, registration, and memorialization of assignment of patent, copyright, mask work or other applications, (ii) in the enforcement of any applicable Proprietary Rights, and (iii) in other legal proceedings related to the Company's Innovations. "**Proprietary Rights**" means patents, copyrights, mask work, moral rights, trade secrets and other proprietary rights. No provision in this Agreement is intended to require Executive to assign or offer to assign any of Executive's rights in any invention for which Executive can establish that no trade secret information of the Company was used, and which was developed on Executive's own time, unless the invention relates to the Company's actual or demonstrably anticipated research or development, or the invention results from any work performed by Executive for the Company.

1.2. Confidentiality. In the course of Executive's employment with the Company and the performance of Executive's duties on behalf of the Company and its affiliates hereunder, Executive will be provided with, and will have access to, Confidential Information (as defined below). In consideration of Executive's receipt and access to such Confidential Information, and as a condition of Executive's employment, Executive shall comply with this Section 5.2

(a) Both during the Term and thereafter, except as expressly permitted by this Agreement, Executive shall not disclose any Confidential Information to any person or entity and shall not use any Confidential Information except for the benefit of the Company or its affiliates. Executive shall follow all Company policies and protocols regarding the security of all documents and other materials containing Confidential Information (regardless of the medium on which Confidential Information is stored). Except to the extent required for the performance of Executive's duties on behalf of the Company or any of its affiliates, Executive shall not remove from facilities of the Company or any of its affiliates any information, property, equipment, drawings, notes, reports, manuals, invention records, computer software, customer information, or other data or materials that relate in any way to the Confidential Information, whether paper or electronic and whether produced by Executive or obtained by the Company or any of its

affiliates. The covenants of this Section 5.2(a) shall apply to all Confidential Information, whether now known or later to become known to Executive during the period that Executive is employed by or affiliated with the Company or any of its affiliates.

(b) Notwithstanding any provision of Section 5.2(a) to the contrary, Executive may make the following disclosures and uses of Confidential Information:

(i) disclosures to other employees, officers or directors of the Company or any of its affiliates who have a need to know or for whom it is appropriate to share the information in connection with the businesses of the Company or any of its affiliates or in connection with performance reviews of employees of the Company;

(ii) disclosures to customers and suppliers when, in the reasonable and good faith belief of Executive, such disclosure is in connection with Executive's performance of Executive's duties;

(iii) disclosures and uses that are approved in writing by the Board; or

(iv) disclosures to a person or entity that has (x) been retained by the Company or any of its affiliates to provide services to the Company and/or its affiliates and (y) agreed in writing to abide by the terms of a confidentiality agreement.

(c) Upon the expiration of the Term, and at any other time upon request of the Company, Executive shall promptly and permanently surrender and deliver to the Company all documents (including electronically stored information) and all copies thereof and all other materials of any nature containing or pertaining to all Confidential Information and any other Company property (including any Company-issued computer, mobile device or other equipment) in Executive's possession, custody or control and Executive shall not retain any such documents or other materials or property of the Company or any of its affiliates. Within ten (10) days of any such request, Executive shall certify to the Company in writing that all such documents, materials and property have been returned to the Company or otherwise destroyed.

(d) "**Confidential Information**" means all confidential, competitively valuable, non-public or proprietary information that is conceived, made, developed or acquired by or disclosed to Executive (whether conveyed orally or in writing), individually or in conjunction with others, during the period that Executive is employed or engaged by the Company or any of its affiliates (whether during business hours or otherwise and whether on the Company's premises or otherwise) including: (i) technical information of the Company, its affiliates, its investors, customers, vendors, suppliers or other third parties, including computer programs, software, databases, data, ideas, know-how, formulae, compositions, processes, discoveries, machines, inventions (whether patentable or not), designs, developmental or experimental work, techniques, improvements, work in process, research or test results, original works of authorship, training programs and procedures, diagrams, charts, business and product development plans, and similar items; (ii) information relating to the Company or any of its affiliates' businesses or properties, products or services (including all such information relating to corporate opportunities, operations, future plans, methods of doing business, business plans, strategies for developing business and market share, research, financial and sales data, pricing terms, evaluations, opinions, interpretations, acquisition prospects, the identity of customers or acquisition targets or their requirements, the identity of key contacts within customers' organizations or within the organization of acquisition prospects, or marketing and merchandising techniques, prospective names and marks) or pursuant to which the Company or any of its affiliates owes a confidentiality obligation; and (iii) other valuable, confidential information and trade secrets of the Company, its affiliates, its customers or other third parties. Moreover, all documents, videotapes, written presentations, brochures, drawings, memoranda,

notes, records, files, correspondence, manuals, models, specifications, computer programs, e-mail, voice mail, electronic databases, maps, drawings, architectural renditions, models and all other writings or materials of any type including or embodying any of such information, ideas, concepts, improvements, discoveries, inventions and other similar forms of expression are and shall be the sole and exclusive property of the Company or its other applicable affiliates and be subject to the same restrictions on disclosure applicable to all Confidential Information pursuant to this Agreement. For purposes of this Agreement, Confidential Information shall not include any information that (A) is or becomes generally available to the public other than as a result of a disclosure or wrongful act of Executive or any of Executive's agents; (B) was available to Executive on a non-confidential basis before its disclosure by the Company or any of its affiliates; (C) becomes available to Executive on a non-confidential basis from a source other than the Company or any of its affiliates; provided, however, that such source is not bound by a confidentiality agreement with, or other obligation with respect to confidentiality to, the Company or any of its affiliates; or (D) is required to be disclosed by applicable law.

(e) Notwithstanding the foregoing, nothing in this Agreement shall prohibit or restrict Executive from lawfully: (i) initiating communications directly with, cooperating with, providing information to, causing information to be provided to, or otherwise assisting in an investigation by, any governmental authority regarding a possible violation of any law; (ii) responding to any inquiry or legal process directed to Executive from any such governmental authority; (iii) testifying, participating or otherwise assisting in any action or proceeding by any such governmental authority relating to a possible violation of law; or (iv) making any other disclosures that are protected under the whistleblower provisions of any applicable law. Additionally, pursuant to the federal Defend Trade Secrets Act of 2016, an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (A) is made (1) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney and (2) solely for the purpose of reporting or investigating a suspected violation of law; (B) is made to the individual's attorney in relation to a lawsuit for retaliation against the individual for reporting a suspected violation of law; or (C) is made in a complaint or other document filed in a lawsuit or proceeding, if such filing is made under seal. Nothing in this Agreement requires Executive to obtain prior authorization before engaging in any conduct described in this paragraph, or to notify the Company that Executive has engaged in any such conduct.

1.3. Mutual Nondisparagement. Subject to Section 5.2(e) above, Executive agrees that from and after the Effective Date, Executive will not, directly or indirectly, make, publish, or communicate any disparaging or defamatory comments regarding the Company, or any of its respective current or former directors, officers, members, managers, partners, or executives. The Company agrees that it will counsel its senior officers and directors to not make, publish, or communicate any disparaging or defamatory comments regarding Executive. The foregoing shall not be violated by truthful statements in response to legal process, required governmental testimony or filings or administrative or arbitral proceedings (including, without limitation, depositions in connection with such proceedings), and the foregoing limitation on the Company's senior executives and directors shall not be violated by statements that they in good faith believe are necessary or appropriate to make in connection with performing their duties and obligations to the Company or any of its affiliates.

1.4. Remedies. Executive's and the Company's duties under this Article V shall survive termination of Executive's employment with the Company and the termination of this Agreement. Because of the difficulty of measuring economic losses to the Company and its affiliates as a result of a breach or threatened breach of the covenants set forth in this Article V, Section 6.2 and Article VII, and because of the immediate and irreparable damage that would be caused to the Company and its affiliates for which they would have no other adequate remedy, Executive acknowledges that a remedy at law for any breach or threatened breach by Executive

of Article V, as well as Executive's obligations pursuant to Section 6.2 and Article VII below, would be inadequate, and Executive therefore agrees that the Company shall be entitled to seek injunctive relief in case of any such breach or threatened breach from any court of competent jurisdiction, without the necessity of showing any actual damages or that money damages would not afford an adequate remedy, and without the necessity of posting any bond or other security. The aforementioned equitable relief shall not be the Company's or any of its affiliates' exclusive remedy for a breach but instead shall be in addition to all other rights and remedies available to the Company and each of its affiliates at law and equity.

1.5. Modification. The covenants in this Article V, Section 6.2 and Article VII, and each provision and portion hereof, are severable and separate, and the unenforceability of any specific covenant (or portion thereof) shall not affect the provisions of any other covenant (or portion thereof). If it is determined by an arbitrator or a court of competent jurisdiction in any state that any restriction in this Article V, Section 6.2 and Article VII is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the arbitrator or the court to render it enforceable to the maximum extent permitted by the law of that state.

ARTICLE VI OUTSIDE ACTIVITIES

1.1. Other Activities.

(a) Except as otherwise provided in Section 6.1(b), Executive shall not, during the term of this Agreement undertake or engage in any other employment, occupation or business enterprise, other than ones in which Executive is a passive investor, unless Executive obtains the prior written consent of the Chief Executive Officer; provided, however, that Executive shall be permitted to manage personal investments to the extent such investments do not otherwise breach the Company's policies or the terms and conditions of this Agreement or any other agreement between the Executive and the Company.

(b) Executive may engage in civic and not-for-profit activities so long as such activities do not materially interfere with the performance of Executive's duties hereunder.

1.2. Competition/Investments. During the term of Executive's employment by the Company, Executive shall not (except on behalf of the Company) directly or indirectly, whether as an officer, director, stockholder, partner, proprietor, associate, representative, consultant, or in any capacity whatsoever engage in, become financially interested in, be employed by or have any business connection with any other person, corporation, firm, partnership or other entity whatsoever which are known by Executive to compete directly with the Company or any of its affiliates, throughout the world, in any line of business engaged in (or planned to be engaged in) by the Company; provided, however, that anything above to the contrary notwithstanding, Executive may own, as a passive investor, securities of any competitor corporation, so long as Executive's direct holdings in any one such corporation do not, in the aggregate, constitute more than 3% of the voting stock of such corporation. In addition, during the term of Executive's employment by the Company and for the one (1) year period thereafter, in order to protect the Company's legitimate business interests, including the value of the Company's confidential information, trade secrets, goodwill and training, which Executive acknowledges and agrees Executive has received and will continue to receive, Executive shall not (except on behalf of the Company) directly or indirectly, whether as an officer, director, stockholder, partner, proprietor, associate, representative, consultant, or in any capacity whatsoever engage in, become financially interested in, be employed by or have any business connection with any other person, corporation, firm, partnership or other entity whatsoever which is known by Executive to (a) contact, deal with or otherwise be involved in any transaction(s) or agreement(s) relating to any

lithium mineral, mining or other related rights of the Company and its affiliates in the geographic area commonly referred to as the "Carolina Tin-Spodumene Belt" (collectively, the **Non-Compete Area**"); or (b) take any action to circumvent or usurp any right, property or interest associated with or beneficial to the reasonable development and operation of the assets of the Company and its affiliates within the Non-Compete Area. If it is determined by a court of competent jurisdiction in any state that any restriction in this Section 6.2 is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the law of that state.

1.3. Defense of Claims; Cooperation. During the Term and thereafter, upon reasonable request from the Company, Executive shall use commercially reasonable efforts to cooperate with the Company and its affiliates in the defense of any claims or actions that may be made by or against the Company or any of its affiliates that relate to Executive's actual or prior areas of responsibility or knowledge. Executive shall further use commercially reasonable efforts to provide reasonable and timely cooperation in connection with any actual or threatened claim, action, inquiry, review, investigation, process, or other matter (whether conducted by or before any court, arbitrator, regulatory, or governmental entity, or by or on behalf of the Company or any of its affiliates), that relates to Executive's actual or prior areas of responsibility or knowledge.

ARTICLE VII NONINTERFERENCE

Executive shall not, during the term of Executive's employment by the Company and, solely with respect to clause (ii) below, for twelve (12) months thereafter, either on Executive's own account or jointly with or as a manager, agent, officer, employee, consultant, partner, joint venturer, owner or stockholder or otherwise on behalf of any other person, firm or corporation, directly or indirectly solicit, induce attempt to solicit any of (i) its customers or clients to terminate their relationship with the Company or to cease purchasing services or products from the Company or (ii) its officers or employees or offer employment to any person who is an officer or employee of the Company; *provided, however*, that a general advertisement to which an employee of the Company responds shall in no event be deemed to result in a breach of this Article VII. If it is determined by a court of competent jurisdiction in any state that any restriction in this Article VII is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the law of that state.

ARTICLE VIII GENERAL PROVISIONS

1.1. Notices. Any notices provided hereunder must be in writing and shall be deemed effective upon the earlier of personal delivery (including personal delivery by facsimile or electronic mail) or the third day after mailing by first class mail, to the Company at its primary office location and to Executive at Executive's address as listed on the Company's books and records.

1.2. Tax Withholding. Executive acknowledges that all amounts and benefits payable under this Agreement are subject to deduction and withholding to the extent required by applicable law.

1.3. Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law

or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

1.4. Clawback. Amounts paid or payable under this Agreement shall be subject to the provisions of any applicable clawback policies or procedures adopted by the Company or any of its affiliates applicable to Executive, which clawback policies or procedures may provide for forfeiture and/or recoupment of amounts paid or payable under this Agreement. Notwithstanding any provision of this Agreement to the contrary, the Company and each of its affiliates reserves the right, without the consent of Executive, to adopt any such clawback policies and procedures, including such policies and procedures applicable to this Agreement with retroactive effect.

1.5. Waiver. Any waiver of this Agreement must be executed by the party to be bound by such waiver. If either party should waive any breach of any provisions of this Agreement, they shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement or any similar or dissimilar provision or condition at the same or any subsequent time. The failure of either party hereto to take any action by reason of any breach will not deprive such party of the right to take action at any time.

1.6. Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company and is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter, and will supersede all prior agreements, understandings, discussions, negotiations and undertakings, whether written or oral, between the parties with respect to the subject matter hereof, including, but not limited to, the Prior Employment Agreement, which shall be terminated and of no further force or effect following the Effective Date. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein or therein, and cannot be modified or amended except in a writing signed by a duly-authorized officer of the Company and Executive.

1.7. Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

1.8. Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

1.9. Successors and Assigns. This Agreement is intended to bind and inure to the benefit of and be enforceable by Executive and the Company, and their respective successors, assigns, heirs, executors and administrators, except that Executive may not assign Executive's rights or delegate Executive's duties or obligations hereunder without the prior written consent of the Company.

1.10. Effect of Termination. The provisions of Section 2.4 and Articles IV, V, VII and VIII and those provisions necessary to interpret and enforce them, shall survive any termination of this Agreement and any termination of the employment relationship between Executive and the Company.

1.11. Third-Party Beneficiaries. Each affiliate of the Company that is not a signatory to this Agreement shall be a third-party beneficiary of Executive's obligations under Sections 2.4 and 8.14 and Articles V, VI and VII and shall be entitled to enforce such obligations as if a party hereto.

1.12. Executive Acknowledgement. Executive acknowledges and agrees that (a) Executive was represented by counsel in connection with the negotiation of this Agreement, and (b) that Executive has read and understands the Agreement, is fully aware of its legal effect, and has entered into it freely based on Executive's own judgment.

1.13. Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of North Carolina without regard to the conflicts of law provisions thereof. With respect to any claim or dispute related to or arising under this Agreement, the parties hereby consent to the arbitration provisions of Section 8.14 and recognize and agree that should any resort to a court be necessary and permitted under this Agreement, then they consent to the exclusive jurisdiction, forum and venue of the state and federal courts (as applicable) located in North Carolina.

1.14. Jurisdiction. The parties agree that any suit, action or proceeding seeking to enforce any provision of, or based on any matter arising out of or in connection with, this Agreement or the transactions contemplated hereby, whether in contract, tort or otherwise, must be brought in the United States District Court for the Western District of North Carolina or in the courts of the State of North Carolina located in Charlotte, North Carolina, so long as one of such courts has subject matter jurisdiction over such suit, action or proceeding. Any cause of action arising out of this Agreement is deemed to have arisen from a transaction of business in the State of North Carolina. Each of the parties irrevocably consents to the personal jurisdiction of such courts (and the appropriate appellate courts therefrom) in any such suit, action or proceeding and irrevocably waives, to the fullest extent permitted by law, any objection that it may now or hereafter have to the laying of the venue of any such suit, action or proceeding in any such court or that any such suit, action or proceeding which is brought in any such court has been brought in an inconvenient form. Process in any such suit, action or proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court.

[Signature page follows]

In Witness Whereof, the parties have executed this Agreement as of the date first written above.

PIEDMONT LITHIUM INC.

By: /s/ Keith Phillips
Keith Phillips

Title: Chief Executive Officer

Accepted and Agreed:

/s/ Austin Devaney
Austin D. Devaney

[Signature page to Executive Employment Agreement for Austin D. Devaney]

Exhibit 21.1

List of Subsidiaries

<u>Name</u>	<u>Jurisdiction of Organization</u>	<u>Ownership Percentage</u>
Piedmont Lithium Inc.	Delaware	100%
PLIH GP, LLC	Delaware	100%
Piedmont Lithium PTY LTD	Australia	100%
PLNC Holdings, LLC	Delaware	100%
PLNC Land, LLC	Delaware	100%
Gaston Land Company, LLC	North Carolina	100%
PLTN Holdings, LLC	Delaware	100%
PLTN Land, LLC	Delaware	100%
PLTN Real Estate, LLC	Delaware	100%
LASEC Group, LLC	Delaware	100%
Lantern Resources PTY LTD	Australia	51%
Piedmont Lithium Carolinas, Inc.	North Carolina	100%
Piedmont Lithium Ghana Holdings, LLC	Delaware	100%
Piedmont Lithium Quebec Holdings, LLC	Delaware	100%
Pronto Minerals, LLC	North Carolina	33%

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-256454 on Form S-8, and Registration Statement No. 333-259798 on Form S-3 of our reports dated March 1, 2023, relating to the consolidated financial statements of Piedmont Lithium Inc. and subsidiaries, and the effectiveness of internal control over financial reporting, appearing in the Annual Report on Form 10-K of Piedmont Lithium Inc. for the year ended December 31, 2022.

/s/DELOITTE & TOUCHE LLP

Charlotte, North Carolina

March 1, 2023

CONSENT

Board of Directors
Piedmont Lithium Inc.
Belmont, North Carolina

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333- 256454) of Piedmont Lithium Inc. of our report dated 23 February 2023, relating to the consolidated financial statements of Atlantic Lithium Limited which appears in this Annual Report on Form 10-K by Piedmont Lithium Inc. Our report contains an explanatory paragraph regarding Atlantic Lithium Limited's ability to continue as a going concern.

BDO Audit Pty Ltd

/s/ Richard Swaby

Richard Swaby
Brisbane, Queensland, March 1, 2023

CONSENT

Board of Directors
Piedmont Lithium Inc.
Belmont, North Carolina

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333- 256454) of Piedmont Lithium Inc. of our report dated 26 February 2023, relating to the consolidated financial statements of Sayona Mining Limited which appears in this Annual Report on Form 10-K by Piedmont Lithium Inc.

/s/ Nexia Brisbane Audit Pty Ltd.

March 1, 2023

Consent of Qualified Person

In accordance with the requirements of Regulation S-K 1300 Modernization of Property Disclosures §229.1302(b)(4)(iv).

Report Description

Report titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina"

("Report")

Piedmont Lithium Inc.

("Company")

Carolina Lithium Project

("Deposit")

February 27, 2023

("Date of Report")

Statement

I, **Dr. Steven Keim, PE**, an authorized representative of Marshall Miller & Associates, Inc., confirm that:

- In connection with any Securities Act filings or Exchange Act report and any amendment, supplement, or exhibit thereto, I consent to:
 - o The filing and use of the Technical Report Summary titled "*Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina*" ("TRS – Definitive Feasibility Study") in connection with the Company's 10-K filing with an approximate filing date of February 28, 2023; and,
 - o The use of the Marshall Miller & Associates, Inc. name, including our status as an expert or Qualified Person (as defined in Subpart 1300 of Regulation S-K promulgated by the Securities and Exchange Commission) in connection with the TRS – Definitive Feasibility Study; and,
 - o The information derived, summarized, quoted or reference from the TRS – Definitive Feasibility Study, or portions thereof, that were prepared by us, that we supervised the preparation of and/or that was reviewed or approved by us, that is reported or incorporated by reference into a Security Act filing.
- I have read and understood the requirements of the Regulation S-K 1300 Modernization of Property Disclosures.
- Marshall Miller & Associates, Inc. meets the definition of a "Qualified Person" as defined by Regulation S-K, and to the activity for which our firm is accepting responsibility.
- I have reviewed the Technical Report Summary to which this Consent Statement applies.
- I am an authorized representative and full-time employee of **Marshall Miller & Associates, Inc.** who has been engaged by **Piedmont Lithium Inc.** to prepare the documentation for the **Carolina Lithium Project** on which the Report is based, for the period ended on **27 February 2023**.
- While the period ends on February 27, 2023, the Report maintains an effective date of December 31, 2021.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in our supporting documentation as of the effective date of the report, December 31, 2021, relating to:

- o Section 1 – Executive Summary
 - o Section 2 – Introduction
 - o Section 3 – Property Description
 - o Section 4 – Accessibility, Climate, Local Resources, Infrastructure, Physiography
 - o Section 5 – History
 - o Section 6 – Geological Setting, Mineralization, and Deposit
 - o Section 12 – Ore Reserve Estimates
 - o Section 13 – Mining Methods
 - o Section 15 – Infrastructure
 - o Section 17 – Environmental Studies and Permitting
 - o Section 18 – Capital and Operating Costs
 - o Section 20 – Adjacent Properties
 - o Section 22 – Interpretation and Conclusions
 - o Section 23 – Recommendations
 - o Section 24 – References
 - o Section 25 – Reliance on Information Provided by the Registrant
-

CONSENT

I consent to the filing of the Technical Report Summary by **Piedmont Lithium Inc.** ("Reporting Company")

Additional Reports related to the Deposits for which the Qualified Person signing this form is accepting responsibility:

- The Reporting Company's Annual Reports (10-K) for the next 12 months;
- The Reporting Company's Quarterly Reports for the next 12 months;
- The Reporting Company's Investor Presentations for the next 12 months;
- The Reporting Company's future press releases for the next 12 months, until such time that the Report is superseded or this consent is otherwise withdrawn;
- The Reporting Company's exhibition booths at any conferences for the next 12 months; and
- Any other releases, presentations and promotional material made by the Reporting Company during the next 12 months, until such time that the exploration target included in the Report is superseded or this consent is otherwise withdrawn.

/s/ Steven A. Kiem

Signature of Authorized Representative of the 3rd Party Firm Acting as Qualified Person

February 27, 2023

Date

/s/ Kevin M. Andrews

Signature of Witness

Kevin M. Andrews Blacksburg, VA (USA)

Print Witness Name

Consent of Qualified Person

In accordance with the requirements of Regulation S-K 1300 Modernization of Property Disclosures §229.1302(b)(4)(iv).

Report Description

Report titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina"

("Report")

Piedmont Lithium Inc.

("Company")

Carolina Lithium Project

("Deposit")

February 27, 2023

("Date of Report")

Statement

I, **Leon McGarry, P. Geo.**, of McGarry Geoconsulting Corp., confirm that:

- In connection with any Securities Act filings or Exchange Act report and any amendment, supplement, or exhibit thereto, McGarry Geoconsulting Corp. consents to:
 - o The filing and use of the Technical Report Summary titled "*Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina*" ("TRS – Definitive Feasibility Study") in connection with the Company's 10-K filing with an approximate filing date of February 28, 2023; and,
 - o The use of the McGarry Geoconsulting name, including our status as an expert or Qualified Person (as defined in Subpart 1300 of Regulation S-K promulgated by the Securities and Exchange Commission) in connection with the TRS – Definitive Feasibility Study; and,
 - o The information derived, summarized, quoted or reference from the TRS – Definitive Feasibility Study, or portions thereof, that were prepared by us, that we supervised the preparation of and/or that was reviewed or approved by us, that is reported or incorporated by reference into a Security Act filing.
- I have read and understood the requirements of the Regulation S-K 1300 Modernization of Property Disclosures.
- I am a "Qualified Person" as defined by Regulation S-K, and to the activity for which I am accepting responsibility.
- I have reviewed the Technical Report Summary to which this Consent Statement applies.
- I am a full-time employee of **McGarry Geoconsulting Corp.** who has been engaged by **Piedmont Lithium Inc.** to prepare the documentation for the **Carolina Lithium Project** on which the Report is based, for the period ended on **27 February 2023**.
- While the period ends on February 27, 2023, the Report maintains an effective date of December 31, 2021.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in our supporting documentation as of the effective date of the report, December 31, 2021, relating to:

- o Section 1 – Executive Summary
 - o Section 2 – Introduction
 - o Section 3 – Property Description
 - o Section 4 – Accessibility, Climate, Local Resources, Infrastructure, Physiography
 - o Section 5 – History
 - o Section 6 – Geological Setting, Mineralization, and Deposit
 - o Section 9 – Data Verification
 - o Section 10 – Mineral Processing and Metallurgical Testing
 - o Section 11 – Mineral Resource Estimates
 - o Section 22 – Interpretation and Conclusions
 - o Section 23 – Recommendations
 - o Section 24 – References
 - o Section 25 – Reliance on Information Provided by the Registrant
-

CONSENT

I consent to the filing of the Technical Report Summary by **Piedmont Lithium Inc.** ("Reporting Company")

Additional Reports related to the Deposits for which the Qualified Person signing this form is accepting responsibility:

- The Reporting Company's Annual Reports (10-K) for the next 12 months;
- The Reporting Company's Quarterly Reports for the next 12 months;
- The Reporting Company's Investor Presentations for the next 12 months;
- The Reporting Company's future press releases for the next 12 months, until such time that the Report is superseded or this consent is otherwise withdrawn;
- The Reporting Company's exhibition booths at any conferences for the next 12 months; and
- Any other releases, presentations and promotional material made by the Reporting Company during the next 12 months, until such time that the exploration target included in the Report is superseded or this consent is otherwise withdrawn.

/s/ Leon McGary

Signature of Competent Person

Professional Geoscientists Ontario

Professional Membership

/s/ Amy Davies

Signature of Witness

February 27, 2023

Date

2348

Membership Number

Amy Davies, Toronto

Print Witness Name

Consent of Qualified Person

In accordance with the requirements of Regulation S-K 1300 Modernization of Property Disclosures §229.1302(b)(4)(iv).

Report Description

Report titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina"

("Report")

Piedmont Lithium Inc.

("Company")

Carolina Lithium Project

("Deposit")

February 27, 2023

("Date of Report")

Statement

I, **Peter Grigsby, CP, Eng.**, an authorized representative of Primero Group Americas Inc., confirm that:

- In connection with any Securities Act filings or Exchange Act report and any amendment, supplement, or exhibit thereto, I consent to:
 - o The filing and use of the Technical Report Summary titled "*Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina*" ("TRS – Definitive Feasibility Study") in connection with the Company's 10-K filing with an approximate filing date of February 28, 2023; and,
 - o The use of the Primero Group Americas Inc. name, including our status as an expert or Qualified Person (as defined in Subpart 1300 of Regulation S-K promulgated by the Securities and Exchange Commission) in connection with the TRS – Definitive Feasibility Study; and,
 - o The information derived, summarized, quoted or reference from the TRS – Definitive Feasibility Study, or portions thereof, that were prepared by us, that we supervised the preparation of and/or that was reviewed or approved by us, that is reported or incorporated by reference into a Security Act filing.
- I have read and understood the requirements of the Regulation S-K 1300 Modernization of Property Disclosures.
- Primero Group Americas Inc. meets the definition of a "Qualified Person" as defined by Regulation S-K, and to the activity for which our firm is accepting responsibility.
- I have reviewed the Technical Report Summary to which this Consent Statement applies.
- I am an authorized representative and full-time employee of **Primero Group Americas Inc.** who has been engaged by **Piedmont Lithium Inc.** to prepare the documentation for the **Carolina Lithium Project** on which the Report is based, for the period ended on **27 February 2023**.
- While the period ends on February 27, 2023, the Report maintains an effective date of December 31, 2021.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in our supporting documentation as of the effective date of the report, December 31, 2021, relating to:

- o Section 1 – Executive Summary
 - o Section 2 – Introduction
 - o Section 10 – Mineral Processing and Metallurgical Testing
 - o Section 14 – Processing and Recovery Methods
 - o Section 18 – Capital and Operating Costs
 - o Section 19 - Economic Model and Sensitivity Analysis
 - o Section 22 – Interpretation and Conclusions
 - o Section 23 – Recommendations
 - o Section 24 – References
 - o Section 25 – Reliance on Information Provided by the Registrant
-

CONSENT

I consent to the filing of the Technical Report Summary by **Piedmont Lithium Inc.** ("Reporting Company")

Additional Reports related to the Deposits for which the Qualified Person signing this form is accepting responsibility:

- The Reporting Company's Annual Reports (10-K) for the next 12 months;
- The Reporting Company's Quarterly Reports for the next 12 months;
- The Reporting Company's Investor Presentations for the next 12 months;
- The Reporting Company's future press releases for the next 12 months, until such time that the Report is superseded or this consent is otherwise withdrawn;
- The Reporting Company's exhibition booths at any conferences for the next 12 months; and
- Any other releases, presentations and promotional material made by the Reporting Company during the next 12 months, until such time that the exploration target included in the Report is superseded or this consent is otherwise withdrawn.

/s/ Peter Grigsby

Signature of Authorized Representative of the 3rd Party Firm Acting as Qualified Person

February 27, 2023

Date

/s/ Ahren Gray

Signature of Witness

Ahren Gray

Print Witness Name

I, Keith D. Phillips, certify that:

1. I have reviewed this Annual Report on Form 10-K of Piedmont Lithium Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: March 1, 2023

By: /s/ Keith D. Phillips

Name: Keith D. Phillips

Title: President and Chief Executive Officer
(Principal Executive Officer)

I, Michael White, certify that:

1. I have reviewed this Annual Report on Form 10-K of Piedmont Lithium Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: March 1, 2023

By: /s/ Michael White

Name: Michael White

Title: Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES OXLEY ACT OF 2002**

In connection with the Annual Report of Piedmont Lithium Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 (the "Report") as filed with the Securities and Exchange Commission on the date hereof, I, Keith D. Phillips, Chief Executive Officer of the Company, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act, as amended; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2023

By: /s/ Keith D. Phillips

Name: Keith D. Phillips

Title: President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES OXLEY ACT OF 2002**

In connection with the Annual Report of Piedmont Lithium Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 (the "Report") as filed with the Securities and Exchange Commission on the date hereof, I, Michael White, Chief Financial Officer of the Company, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act, as amended; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2023

By: /s/ Michael White

Name: Michael White

Title: Executive Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)



DESIGN CONSTRUCT OPERATE

TECHNICAL REPORT SUMMARY

CAROLINA LITHIUM PROJECT

18605-REP-GE-002



Date	Revision	Status	Prepared	Reviewed	Approved
25-Jan-2022	D	Issued for Study	S. Normandin	P. Grigsby	P. Grigsby
5-Jan 2023	E	Issued for review			
27-Feb 2023	F	Issued for Study – Amended	A. Gray	P. Grigsby	P. Grigsby



TECHNICAL REPORT SUMMARY
CAROLINA LITHIUM PROJECT

Statement of Use and Preparation

This Technical Report Summary (TRS) serves as an amendment to a previously filed TRS, with an effective date of December 31, 2021, and was prepared for the sole use of Piedmont Lithium Inc. (PLL) and its affiliated and subsidiary companies and advisors. Copies or references to information in this report may not be used without the written permission of PLL.

This report includes methodologies behind the derivation of mineral resources and ore reserves, as defined under the United States Securities and Exchange Commission (SEC) and Joint Ore Reserve Committee (JORC), through the consideration of geological, mining and environmental factors. Probable ore reserves, derived from an indicated resource, both of which are assessed in this TRS, ultimately contribute to revenues and profits in a hypothetical business plan which aligns with PLL's current mining plan of the subject property. Certain information set forth in this report contains "forward-looking information", including production of reserves, associated productivity rates, operating costs, capital costs, sales prices, and other assumptions. These statements are not guarantees of future performance and undue reliance should not be placed on them. The assumptions used to develop the forward-looking information and the risks that could cause the actual results to differ materially are detailed in the body

information and the data and results used are stated clearly to permit assessment of the accuracy of this report.

By definition, “indicated” and “probable” terminology carries a lower level of geological and engineering confidence than that which would be reflected through the derivation of “measured” resources and “proven” reserves. Indicated definitions provide a confidence level to support broad estimates of Mineral Resource quantity and grade adequate for long-term mine planning to support Probable Reserve definitions. Resource and reserve estimations, and their impacts on production schedules, processing recoveries, saleable product tonnages, costs, revenues, profits, and other results presented in this TRS align with the definition and accuracy of indicated resources and probable reserves. Through future exploration campaigns, geological and engineering studies, PLL desires to elevate classifications of resources and reserves in due time.

The statement is based on information provided by PLL and reviewed by various professionals and Competent/Qualified Persons from Primero Group, McGarry Geoconsulting Corp, and Marshall Miller & Associates, Inc.

Competent/Qualified professionals who contributed to the drafting of this report meet the definition of Qualified Persons (QPs), consistent with the requirements of the SEC and Competent Persons, consistent with the requirements of JORC. The information in this TRS related to ore resources and mineral reserves is based on, and fairly represents, information compiled by the QPs as of the effective date of the report.



TECHNICAL REPORT SUMMARY
CAROLINA LITHIUM PROJECT

DATE AND SIGNATURE

This Amended Report entitled “Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina”, issue date February 27, 2023 was prepared and signed by the following Authors:

/s/ Leon McGarry

Leon McGarry, P. Geo.

February 27, 2023

McGarry Geoconsulting Corp.

/s/ Steven Keim

Dr. Steven Keim,

February 27, 2023

Designated Representative of Marshall Miller & Associates.

/s/ Peter Grigsby

Peter Grigsby,

February 27, 2023

Designated Representative of Primero Americas Inc.

TECHNICAL REPORT SUMMARY
CAROLINA LITHIUM PROJECT

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CAROLINA LITHIUM PROJECT

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CAROLINA LITHIUM PROJECT

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APPENDIX

QUALIFIED PERSON CONSENT FORMS
PARCEL CONTROL SCHEDULE

1 EXECUTIVE SUMMARY

Piedmont Lithium Inc. (PLL) contracted with Primero Group Americas Inc. (Primero) to develop a Definitive Feasibility Study (DFS) for their Carolina Lithium Project (Project) near Charlotte, NC, including a spodumene mine, a spodumene concentrator and a lithium hydroxide (LiOH) conversion plant to convert the spodumene concentrate (SC6) into lithium hydroxide monohydrate (LiOH·H₂O).

Since the Scoping Study Update report in September 2021 (internal ref no. 18602-REP-GE-001), the study scope has been adjusted and enhanced with the key production values presented in Table 1-1. Note, all references to mass within the report are metric units.

Table 1-1 - Project Main Production Values

Production Target	Value	Units
ROM (ore)	1.95	Mt/y
SC6	242,000	t/y
LiOH	30,000	t/y

With the assistance of Minviro, PLL conducted a Life Cycle Analysis (LCA) of the project with the following main recommendations that are included in the study:

- LiOH Conversion Plant including an alkaline pressure leach technology;
- Electric powered conveyors eliminate mine trucks, reduce noise, dust and diesel-based CO₂ emissions;
- On-site solar complex to power concentrate operations.

These project enhancements are supported by the delineation and increase of the Mineral Resources made possible by additional exploration work and metallurgical testwork. The key highlights are listed below.

1.1 PROPERTY DESCRIPTION

The Project is located in a rural area of Gaston County, North Carolina, USA approximately 40 km northwest of the city of Charlotte. The Property is centered at approximately 35°23'20"N 81°17'20"W and is comprised of approximately 3,237 total acres, of which: 1,332 acres are claims on private property through option or deferred purchase agreements, 113 acres are under a long-term mineral leased agreement, 79 acres are under lease to own agreements, and 1,713 acres are owned by PLL. For the properties hosting the MREs in this report, PLL controls 100% of the surface and mineral rights per one or more of the agreement scenarios described above.

1.2 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Topography of the area surrounding the Project is typical of the Piedmont Plateau characterized by relatively low, rolling hills. Several creeks bisect the property and are surrounded by flat, swampy floodplains that can extend up to 100 m away from the drainage channel. Surface elevations at the Project range from approximately 300 m above sea level in upland regions to approximately 220 m at stream level.

The area surrounding the Property is considered rural with a mixture of cleared farmland and forest in the temperate broadleaf category. Vegetation, where present, is a combination of large trees with smaller underbrush and is easily traversable by foot.

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General access to the Project is via a well-developed network of primary and secondary roads. Interstate highway I-85 lies 10 km to the south of the Project area and provides easy access to Charlotte Douglas International Airport 30 km to the east. A rail line borders the Property to the northwest. Transport links provide access to Charlotte, North Carolina's largest city, within an hour's drive from the Project. The Charlotte metropolitan region has a 2020 population of 2.66 million people.

1.3 HISTORY

The Project lies within the Carolina tin-spodumene belt. Mining in the belt began in the 1950's with the Kings Mountain Mine, currently owned by Albemarle Corporation, and the Hallman-Beam mine near Bessemer City, currently owned by Martin Marietta Corporation. Both former mines are located within approximately 20 km of the Project to the south, near Bessemer City and Kings Mountain, respectively. Portions of the Project area were explored and excavated to shallow depths in the 1950's as the Murphy-Houser mine, owned by the Lithium Corporation of America (predecessor to Livent) (Cooley, 2010).

In 2009, Vancouver based North Arrow Minerals Inc. ("North Arrow") commenced exploration at the property. Extensive geological mapping outlined over 37 spodumene-bearing pegmatite dikes at the Core Property and confirmed localized historical trenching of these dikes by Lithium Corporation of America (Cooley, 2010). North Arrow completed 19 diamond drillholes in 2009/2010. North Arrow subsequently terminated all their property agreement soon thereafter.

In 2016, Piedmont (formerly WCP Resources Limited) began optioning surface and mineral rights at the property. Piedmont commenced a renewed exploration effort at the Project.

1.4 GEOLOGICAL SETTINGS, MINERALIZATION AND DEPOSIT

Within the Project, spodumene-bearing pegmatites are hosted in amphibolite and metasedimentary host rocks. Pegmatites range from fine-grained (aplite) to very coarse-grained with primary mineralogy consisting of spodumene, quartz, plagioclase, potassium-feldspar (K-spar) and muscovite. Bench-scale and pilot-plant scale metallurgical test work on pegmatites within the Mineral Resource model demonstrate that lithium occurs almost exclusively within spodumene and that concentrates of greater than 6.0% Li₂O were achievable with an iron content less than 1.0% Fe₂O₃. Quartz, feldspar, and mica concentrates were produced as by-products of the spodumene concentrate. Initial results demonstrate commercial potential for each by-product.

1.5 EXPLORATION

Between 2017 and 2021, PLL completed five phases of exploratory drilling that has defined the Mineral Resources presented in this report. The current Mineral Resource block models were prepared using all drilling data available on 3 August 2021.

A total of 542 core holes amounting to 80,029 meters (*m*) define the Core Property deposit. As of the cut-off date, 511 assayed drillholes intersect 76 interpreted mineralized pegmatite bodies. A total of 36 diamond core holes totaling 5,563 m define the Central Property deposit, with 31 holes intersecting 11 interpreted mineralized pegmatite bodies. A total of 14 diamond core holes totaling 2,151 m define the Huffstetler Property deposit, with 11 holes intersecting six interpreted mineralized pegmatite bodies.

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CAROLINA LITHIUM PROJECT

1.6 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Diamond drill core was cut in half with a diamond saw. Standard sample intervals were a minimum of 0.35 m and a maximum of 1.5 m for both HQ and NQ drill core, taking into account lithological boundaries (i.e., sampled to, and not across, major contacts).

Samples were numbered sequentially with no duplicates and no missing numbers. Triple tag books using nine-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.

Drill core samples and surface rock 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 to maintain chain of custody. 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.

1.7 DATA VERIFICATION

MGG's QP Leon McGarry visited the site on several occasions. Visual validation of mineralization against assay results was undertaken for several holes. Verification core samples were collected by Leon McGarry.

All drill hole data was imported into Micromine™ software version 15.08. Validation of the data was then completed which included checks for:

- Logical integrity checks of drillhole deviation rates;
- Presence of data beyond the hole depth maximum;
- Overlapping from-to errors within interval data.

Visual validation checks were also made for obviously spurious collar coordinates or downhole survey values.

Sufficient data have been obtained through various exploration and sampling programs to support the geological interpretations at the Property. The data are of sufficient quantity and reliability to reasonably support the lithium resource estimates in this TRS.

1.8 METALLURGICAL TESTING AND MINERAL PROCESSING

1.8.1 Concentrate Metallurgy

In 2019, Piedmont engaged SGS Canada Inc. in Lakefield, Ontario to undertake testwork on variability and composite samples. Dense Medium Separation ("DMS") and locked-cycle flotation tests produced high-quality spodumene concentrate with a grade above 6.0% Li₂O, iron oxide below 1.0%, and low impurities from composite samples. The feed grade of the composite sample was 1.11% Li₂O.

In 2020, a pilot plant testwork program was undertaken at SGS Canada Inc. A 54-t bulk outcrop sample from the Carolina Lithium Project was processed through a DMS and flotation pilot plant. Using the optimized results from the flotation pilot plant, the combined DMS and flotation concentrates graded >6% Li₂O and <1% Fe₂O₃ with lithium recoveries >70%. Optimized testing on the master composite sample resulted in lithium recovery of 82% and concentrate grading 6.13% Li₂O.

In 2021, Piedmont engaged SGS Canada Inc. in Lakefield, Ontario to undertake testwork on nine variability samples. Samples were produced from drill core from the East and South pits and represented the early years of production (i.e., the first 10 years of operation). The samples generally contained elevated levels of host rock dilution (ranging from 9.4% to 17.3%) as compared to the mine plan average (10%). DMS and batch and locked-cycle flotation tests were undertaken. Based on the historical testwork and the 2021 variability program, the DFS assumes a spodumene recovery of 77.0% when targeting a 6.0% Li₂O spodumene concentrate product.

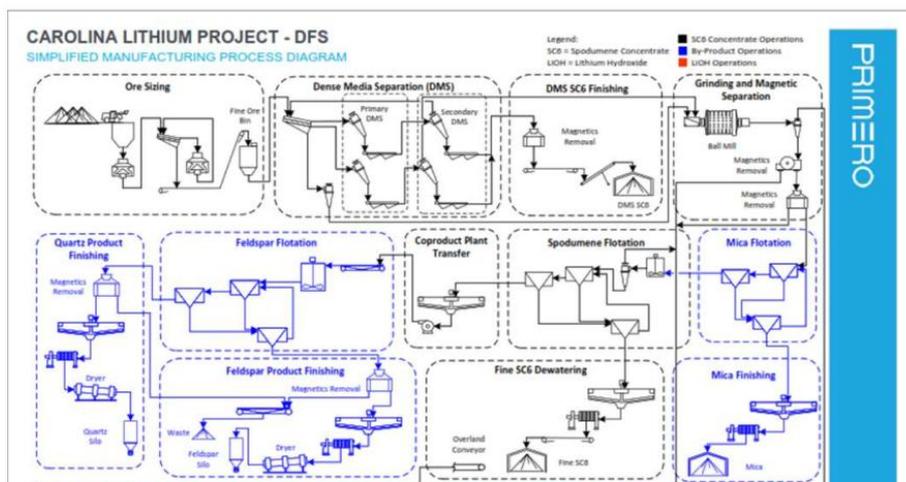
1.8.2 Conversion Metallurgy

In 2021, Piedmont engaged Metso:Outotec to undertake pilot plant testwork using their proprietary Lithium Hydroxide Process. The spodumene concentrate sample used was produced during concentrator pilot plant operation in 2020. The spodumene concentrate was calcined by Metso:Outotec at their laboratory in Oberursel, Germany. The calcined concentrate was then sent to Metso:Outotec Research Center in Pori, Finland for hydrometallurgical testing.

The pilot plant flowsheet tested included: soda leaching, cold conversion, secondary conversion, ion exchange, and lithium hydroxide crystallization. The pilot plant operated for approximately 10 days. Roughly 100 kg of calcined spodumene concentrate was fed to the pilot plant. The average total lithium extraction achieved in soda leaching and cold conversion was 89% during the first 136 h of operation. Process recycles were incorporated in the pilot plant with no significant accumulation of impurities in the process. First stage lithium hydroxide crystallization was operated continuously during the pilot plant. Second stage crystallization was operated in batches after the completion of the continuous pilot plant. Impurities levels in the final battery-quality lithium hydroxide monohydrate product were typically low with Al <10 ppm, Ca <10 ppm, Fe <20 ppm, K <10 ppm, and Si <40 ppm. All other metal impurities were below detection limits.

1.8.3 Process Design

The concentrator process design is based on historical testwork including the 2021 variability testwork program. Lithium hydroxide manufacturing process design is based on pilot plant results and Metso:Outotec experience. The simplified process flow diagram for the Project is shown in Figure 1-1.



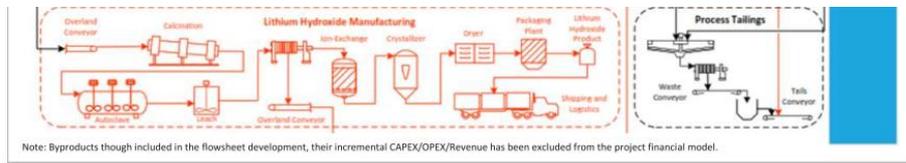


Figure 1-1 - Proposed Carolina Lithium Project block flow diagram

1.9 MINERAL RESOURCES ESTIMATES

MRE for the project, representing in-situ lithium-bearing pegmatites, are stated below in accordance with the U.S. Securities and Exchange Commission (SEC) Regulation S-K 1300 standards and are therefore suitable for public release. Global lithium MRE for the Project exclusive of Mineral Reserves are reported by classification in Table 1-2.

Table 1-2 - Summary of Lithium Mineral Resources Exclusive of Reserves as of October 20, 2021 Based on US\$1,893 /t SC6

	Tonnes (Mt)	Grade (Li ₂ O%)	Li ₂ O (t)	LCE (t)	LiOH·H ₂ O (t)	Cut-Off Grade (% Li ₂ O) ¹	Metallurgical Recovery
Indicated ²	10.0	1.14	112,000	774,000	315,000	0.4	77% ²
Inferred ²	15.9	1.02	162,000	401,000	455,000		

Note 1 – Based on long-term pricing of US\$ 1,893/t SC6, US\$ 101/t quartz, US\$ 54/t feldspar, and US\$ 80/t mica. Byproduct mineral resources are estimated only from the spodumene bearing pegmatites which comprise the Mineral Resource Estimate.
 Note 2 – Metallurgical recovery from spodumene concentration.
 Note 3 – Tabulated Mineral Resources for the Project are exclusive of the Mineral Reserves estimated for the Core Property. Some figures may not add up due to rounding.

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Lithium MRE include tonnage estimates for lithium oxide (Li₂O), Lithium Carbonate Equivalent (LCE) whereby one tonne of Li₂O is equivalent to 2.473 tonnes LCE, and lithium hydroxide mono-hydrate (LiOH·H₂O) tonnage whereby one tonne of Li₂O is equivalent to 2.81 tonnes LiOH·H₂O.

1.10 ORE RESERVE ESTIMATES

An estimate of Ore Reserves was made following long term mine planning and based on the Indicated Mineral Resources contained within the Project's Core Property. The Ore Reserves have been estimated in accordance with the requirements of S-K 1300 and the JORC Code. Table 1-3 show the Ore Reserve Classification.

Table 1-3 - Carolina Lithium Project – Estimate of Ore Reserves (undiluted), ROM Basis

Ore Reserves Category	Tonnes, ROM Basis, Undiluted (Mt)	Grade, ROM Basis, Undiluted (Li ₂ O%)	Li ₂ O (t)	LCE (t)	LiOH·H ₂ O (t)	Cut-Off Grade (% Li ₂ O)	Metallurgical Recovery Concentrator (%)	Metallurgical Recovery Conversion Plant (%)
Proven	-	-	-	-	-	0.4	77	91
Probable	18.26	1.10	200,000	495,000	562,000			
Total	18.26	1.10	200,000	495,000	562,000			

Note 1: Reserves are expressed as tonnages effectively delivered to the run-of-mine (ROM) pad, prior to the application of losses and recovery factors (i.e., metallurgical recovery as expressed above) incurred during concentration and conversion. Block value pricing to support ore reserves is based upon an intermediate 6-percent Li₂O concentrate product, after the processing of ROM reserves in the Company's planned concentrator facility.
 Note 2: Metallurgical recovery of 77-percent for lithium ore is associated with the production of a 6-percent spodumene concentrate in the Company's planned Concentrator. Block values and cutoff grades assume an intermediate spodumene concentrate product with a value of \$1,893/t.
 Note 3: Metallurgical recovery of 91-percent is associated with the production of lithium hydroxide in the Company's planned chemical conversion plant. Revenue streams for financial modeling assume the production and sale of lithium hydroxide at \$18,000/t via the processing of spodumene concentrate derived from ROM ore reserves.

The Probable Ore Reserves have been estimated and based on the consideration of pertinent modifying factors, inclusive of geological, environmental, regulatory, and legal factors, in converting a portion of the Mineral Resources to Ore Reserves. All converted Mineral Resources were classified as Probable Ore Reserves. There were no Measured Mineral Resources defined that could be converted into Proven Ore Reserves and no Inferred Mineral Resources were included in the estimation of Ore Reserves. Cutoff grade of 0.4% Li₂O was used in creation of the block model.

An open pit mining method was selected due to the ore body outcropping in several places along the surface. No other mining method was evaluated as part of the Ore Reserves estimation. Mine design parameters include overburden batter angle in unconsolidated material of 27 degrees, face batter angle of 75 degrees, inter-ramp slope of 57 degrees, overall slope of 51 degrees, berm width of 9.5 meters, berm height working 12 meters, berm height final wall of 24 meters, ramp width of 30 meters, ramp grade of 10%, mine dilution of 10%, process recovery for spodumene concentrate of 77%, and minimum mining width of 50 meters.

Operating costs were established using budget pricing from mining contractors based on a request for proposal issued by Marshall Miller and Associates combined with first principles estimates for utilities including electrical service from Duke Energy. Royalties of \$1.00 per ROM tonne are based on the average land option agreement.

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CAROLINA LITHIUM PROJECT

1.11 MINING METHODS

Pit optimizations were completed by Marshall Miller & Associates in order to produce a production schedule on a quarterly basis for the first five years of operations and on an annual basis thereafter. This resulted in a total production target of approximately 2.56 Mt of 6.0% Li₂O spodumene concentrate ("SC6"), averaging approximately 242,000 t/y of SC6 over the 11-year ore reserve life. This equates to a steady state average of 1.90 Mt/y of ore processed, totaling approximately 20.1 Mt of run-of-mine ("ROM") ore at an average fully diluted ROM grade of 1.0% Li₂O (diluted) over the 11-year ore reserve life.

1.12 MINING OPERATIONS AND PROCESSING PRODUCTION

The concentrator operations production life is 11 years (to align with ore reserves and with a 10% dilution impact). The chemical plant has an operational life of 14 years (SC6 production, to account for stockpiled SC6 generated) and based on processing commencing after Year 1 of the Project. The financial model has been based on concentrate operations including by-products commencing 90 days in advance of chemical plant start-up to build initial SC6 inventory. Produced SC6 which exceeds chemical plant capacities will be stockpiled at the mine to enable the chemical plant to continue operations after the ore reserves are depleted.

Two specialized programs, Maptex Vulcan and Evolution, were used 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 Televiewer), 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 27 degrees were assumed for overburden and oxide material. Overall slope angles of 51 degrees were estimated for fresh material which includes a ramp width of 30 meters. Production schedules for mineral reserves and associated revenue streams were prepared for the Project based on the following parameters:

- A targeted run-of-mine production of 1.9 Mt/y targeting concentrator output of about 242,000 t/y of SC6
- Mining dilution of 10%
- Mine recovery of 100%
- Concentrator processing recovery of 77%
- Chemical plant recovery of 91%
- Mine sequence targets Probable reserves for the schedule

The results reported are based upon a scenario which utilizes extraction of Probable reserves. Table 1-4 shows the production target of the mining plan.

Table 1-4 - Mining Plan Summary (diluted)

Property	ROM Tonnes Processed (Mt)	Waste Tonnes Mined (Mt)	Stripping Ratio (W:O t:t)	ROM Li ₂ O Undiluted Grade (%)	ROM Li ₂ O Diluted Grade (%)	Production Years	Tonnes of SC6 (Mt)
Core	20.09	232.52	11.58	1.10	0.996	1-11	2.57
Central	0	0	0	-	-	-	0
Huffstetler	0	0	0	-	-	-	0

Property	ROM Tonnes Processed (Mt)	Waste Tonnes Mined (Mt)	Stripping Ratio (W:O t:t)	ROM Li ₂ O Undiluted Grade (%)	ROM Li ₂ O Diluted Grade (%)	Production Years	Tonnes of SC6 (Mt)
Total	20.09	232.52	11.58	1.10	0.996	1-11	2.57

1.13 PROCESSING AND RECOVERY METHODS

The processing operations are designed to produce saleable spodumene concentrate by Dense Media Separation (DMS) and flotation, at a concentration plant, and then to further refine the spodumene concentrate to produce a battery and technical grade lithium hydroxide monohydrate at a conversion facility.

The concentrator circuit is supplied from an in-pit primary crush circuit, with the material being conveyed and stockpiled at the ROM pad. The ore is then upgraded through a series of dense media separation units, magnetic separation units and a flotation circuit, to separate the material of value (concentrates) from the various gangue minerals. The key process areas of the concentrator are listed as the following:

- Secondary and tertiary crushing;
- Dense Media Separation (DMS) circuit and magnetic separation;
- Grinding and desliming;
- Spodumene flotation;
- Spodumene flotation concentrate dewatering and handling;
- Flotation tailings dewatering and handling;
- Spodumene concentrate dewatering and handling;
- Process tailings dewatering and handling.

The lithium conversion plant, uses the Metso:Outotec proprietary technology, by converting the spodumene (LiAl(SiO₃)₂) into a lithium carbonate form and then into a soluble lithium hydroxide, to allow crystallization to the final lithium hydroxide monohydrate product. The solutions generated within the circuit are recirculated as much as possible to maintain lithium concentrations, recover as much lithium as possible, and reduce water requirements. The key process areas for the lithium conversion plant are listed as the following:

- Spodumene Concentrate storage and transfer;
- Calcination;
- Grinding and Pulping;
- Carbonate Leaching – High Pressure and Atmospheric;
- Conversion (carbonate to hydroxide);
- Lithium Hydroxide Crystallization and Product Drying;
- Product Bagging Facility;

1.14 INFRASTRUCTURE

A detailed site plan including mining operations, concentrate operations, lithium hydroxide manufacturing, overburden and waste rock disposal and ancillary facilities was developed in connection with the Project's mine permit application submitted in August 2021 (see Figure 1-2).

Navisworks models have been completed for the concentrate operations (see Figure 1-3) and conversion facility (see Figure 1-4) to a DFS level of detail.





Figure 1-2 - Site plan for the Carolina Lithium Operations



Figure 1-3 - Spodumene Concentrator (LIOH Conversion Plant in background)



Figure 1-4 - 3D model of the Lithium Hydroxide Conversion Plant

1.15 MARKET ANALYSIS

Benchmark Mineral Intelligence (“Benchmark”) reports that total battery demand will grow to 312 GWh in 2021 translating to 297kt of LCE demand in 2021, a growth of 41% over 2020 demand. Benchmark forecasts total demand in 2021 to be 430kt on an LCE basis.

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Benchmark further expects the market to remain in a structural deficit or the foreseeable future as demand gets a head-start on supply. In the near impossible scenario that all projects come online on time as planned and without any issues, the first surplus will not occur until 2025. Benchmark believes that in this extreme case, a surplus could only be expected to last a few years before demand forces the market into a large deficit without further new projects yet undiscovered or developed.

The Company analyzed Q4 2021 battery-grade lithium hydroxide from Benchmark, JPMorgan and Macquarie for the period 2022-2025 as well as price forecasts recently announced by other lithium project developers. Based on these and other data this Study assumes long-term pricing of \$18,000/t for battery quality lithium hydroxide for the life of the project (see Table 1-5).

Table 1-5 - Price Forecasts for Battery-Grade Lithium Hydroxide (\$/tonne)

Forecast	2022	2023	2024	2025
Benchmark Minerals	\$20,600	\$26,200	\$25,200	\$20,900
JPMorgan	\$26,625	\$22,500	\$19,737	\$18,420
Macquarie	\$21,275	\$20,415	\$18,545	\$17,540

Piedmont is focused on establishing strategic partnerships with customers for battery grade lithium hydroxide with an emphasis on a customer base which is focused on EV demand growth in North America and Europe. Piedmont will concentrate this effort on these growing EV supply chains, particularly in light of the growing commitments of battery manufacturing by groups such as Ford, General Motors, Stellantis, Toyota, LGES, SK Innovation, Samsung SDI and others. Advanced discussions with prospective customers are ongoing.

1.16 ENVIRONMENTAL STUDIES AND PERMITTING

HDR Engineering has been retained by Piedmont to support permitting activities on the proposed Project.

In November 2019, the Company received a Clean Water Act Section 404 Standard Individual Permit from the US Army Corps of Engineers for the concentrate operations. The Company has also received a Section 401 Individual Water Quality Certification from the North Carolina Division of Water Resources. In connection with the 404 Permit an Environmental Assessment was completed for the Project which resulted in a Finding of No Significant Impact ("FONSI").

The concentrate operations require a North Carolina State Mining Permit from the North Carolina Department of Environmental Quality ("NCDEQ") Division of Energy, Mineral and Land Resources ("DEMLR"). The Company submitted a mine permit application to DEMLR on August 31, 2021. A public hearing in relation to the mine permit application was held on November 15, 2021. The Company has received additional information requests in connection with the mine permit application and responded to these information requests on December 15, 2021. The company expects to receive additional information requests in connection with its mine permit application and will respond to these requests in due course.

Piedmont previously received synthetic minor air permit from the NCDEQ Division of Air Quality ("DAQ") for a proposed lithium hydroxide operation in Kings Mountain. The Company has held pre-application consultation meetings with Division of Air Quality in connection with the integrated Carolina Lithium Project. The Company plans to submit a determination letter to DAQ in January 2022 requesting concurrence with respect to the

spodumene mining as the primary activity of the Carolina Lithium Project. The Company will proceed with an air permit application for the Carolina Lithium Project upon receipt of DAQ’s response to the determination letter request.

Carolina Lithium remains subject to local rezoning and permit requirements. Piedmont remains in pre-application consultation with Gaston County as of the effective date of this report. A rezoning application will follow receipt of a state mining permit. The Company will apply for a special use permit required under the Gaston County UDO upon completion of the rezoning process.

Summaries of material permits and required permit revisions are included in Section 17 of this report. Existing permit applications are constrained to property boundaries as of the date of submittal and will require revisions to meet mine plans as expressed in this TRS.

The list of background environmental studies undertaken in connection with the Project’s permit applications is listed in Section 17.3 of this report.

This Study assumes that the operations will be progressively reclaimed in accordance with the Company’s mine permit application submitted in August 2021. An estimate of \$16.6 M in alkaline amendment costs and \$19 M in closure costs have been included in the sustaining capital for mine reclamation expenses.

1.17 CAPITAL AND OPERATING COSTS

Table 1-6 highlights the total estimated capital expenditures for the Project. Variable contingency is included and has been applied to project costs based on the level of engineering definition completed and the confidence level of supplier and contractor quotations. The capital cost estimate has a ±15% accuracy and is based on Q4 2021 costs.

Table 1-6 – Project Capex Summary

Capex (mm \$)		Direct	Indirect	Grand Total
Area	Sub-Area			
Concentrator Operations				
	1100 - Mining	99.5		99.5
	1200 - Processing Plant	162.2		162.2
	1300 - Site Infrastructure	10.9		10.9
	1400 - Waste Rock	6.0		6.0
	Sub Total - Concentrator Operations	278.5		278.5
Lithium Hydroxide Operations				
	2200 - Overland Network	19.4		19.4
	2400 - LiOH Plant	431.3		431.3
	2900 - Site Infrastructure - LiOH Plant	13.7		13.7
	Sub Total - Lithium Hydroxide Operations	464.3		464.3
Indirect Costs				
	6100 - Concentrator Indirects		32.4	32.4
	6200 - Lithium Hydroxide Indirects		65.1	65.1
	Sub Total - Indirect Costs		97.5	97.5
Owners Cost - Pre-production & Working Capital				

8100 - Owners Cost		73.6	73.6
Sub Total - Owners Cost, Pre-production & Working Capital		73.6	73.6
Grand Total			914.0

The deferred, working and sustaining capital is estimated at \$278 M.

The operating cost estimate was prepared in detail for the Spodumene processing plant. They are presented in Table 1-7. The conversion plant opex is based on producing 30,000 t/y of lithium hydroxide monohydrate. Table 1-8 summarizes the estimated average operating costs for lithium hydroxide production over the life of mining operations.

Table 1-7 – Spodumene Processing Plant Opex Summary

Cost Center	Total Cost		
	US\$/year	US\$/t ore	US\$/t spod conc.
Labor (Process)	\$8,657,990	\$4.56	\$35.68
Operating Consumables and Reagents	\$8,951,905	\$4.72	\$36.89
Power	\$3,938,852	\$2.08	\$16.23
Maintenance Supplies	\$1,059,145	\$0.56	\$4.36
Mobile Equipment	\$593,367	\$0.31	\$2.45
Concentrate transport	-	-	-
Laboratory	\$164,679	\$0.09	\$0.68
Water Treatment	\$790,986	\$0.42	\$3.26
General & Administration	\$507,349	\$0.27	\$2.09
Total	\$24,664,273	\$13.00	\$101.64

Table 1-8 – Conversion Plant Opex Summary

Cost Center	Total Cost		
	US\$/year	US\$/t feed	US\$/t final product
Labor (Process)	\$10,006,330	\$51.31	\$333.54
Operating Consumables	\$30,514,318	\$156.48	\$1,017.14
Power	\$6,428,614	\$32.97	\$214.29
Maintenance Supplies	\$3,211,137	\$16.47	\$107.04
Mobile Equipment	\$304,276	\$1.56	\$10.14
Laboratory	\$2,099,846	\$10.77	\$69.99
General & Administration	\$762,865	\$3.91	\$25.43
Total	\$53,327,385	\$273.47	\$1,777.58

1.18 ECONOMIC MODEL AND SENSITIVITY ANALYSIS

A detailed financial model and discounted monthly cash flow (DCF) has been developed to complete the economic assessment of the project and is based on current (Q4 2021) price projections and cost estimates in U.S. dollars. No provision was made for the effects of future inflation, but cost estimates incorporate recent 2021 inflationary price increases. The evaluation was carried out on a 100%-equity basis using an 8% discount factor. Current US federal and North Carolina state tax regulations were applied to assess the corporate tax liabilities.

The pricing information for battery-grade lithium hydroxide sales were estimated in Q4 2021 and are based on a fixed price of \$18,000/t for battery quality lithium hydroxide. The tax rates utilized in the financial model are based on current federal and state tax laws. The current federal tax rate is 21% and the current North Carolina Tax rate is 2.5% but it reduces to 0% between 2024-2028.

Table 1-9 show the summary of the project economics. The main project economic indicators are presented in Table 1-10. The economic study shows a net profit after tax (NPAT) of \$3,238 M. The net present value of the 14-year based project is \$1,310 M at an 8% discount rate and after applicable taxes. The after-tax internal rate of return (IRR) is 23.7%.

Table 1-9 - Project Economics Summary

Base Case Financial Results	Unit of Measure	Value
Pre-Tax NPV @ 8%	\$ M	1,489
After-Tax NPV @ 8%	\$ M	1,183
Pre-Tax IRR	%	25.1
After-Tax IRR	%	23.0
Pre-Tax Payback Period	Years	6.13
After-Tax Payback Period	Years	6.13

Table 1-10 – Economic Indicator Summary

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Income Statement	Project
	\$ million
Gross revenues (LiOH, SC6 and by-products)	6,980
Net revenues after royalties	6,960
Operating cost cash flow	(1,702)
Head office allocation	(112)
EBITDA	5,127
Capital expenditure (pre-production)	(914)
Sustaining and deferred capital	(278)
Gross profit before tax (EBT)	3,967
Tax	(729)
Net Profit After Tax (NPAT)	3,238

Primero has studied the economical models' sensitivity of the NPV_s and IRR regarding a variation of:

- Capital cost;
- Operating cost
- Spodumene Recovery;
- Lithium Hydroxide Recovery
- Product Pricing.

The results are summarized in Figure 1-5 and Figure 1-6 respectively.

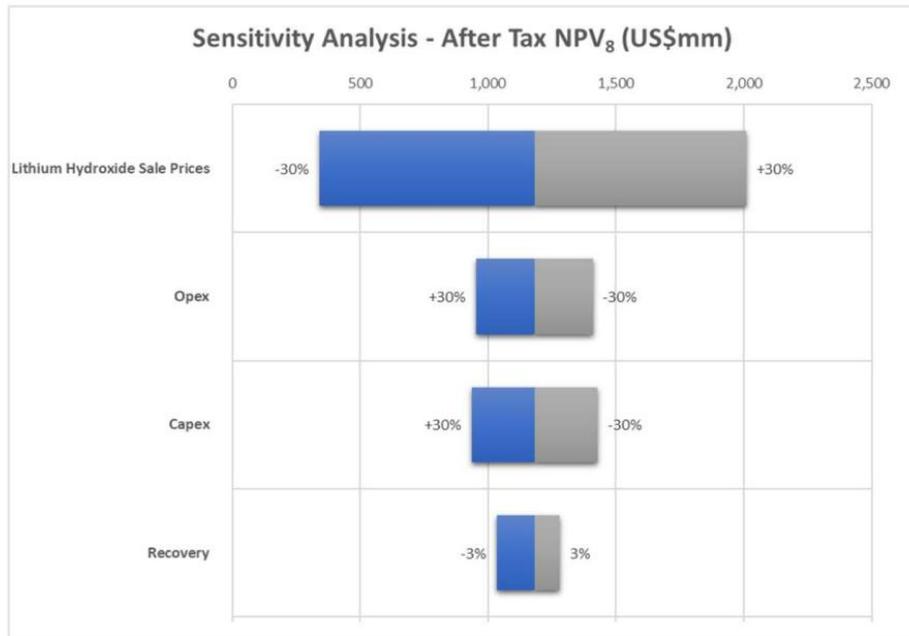


Figure 1-5 - Sensitivity Chart - After Tax NPV₈

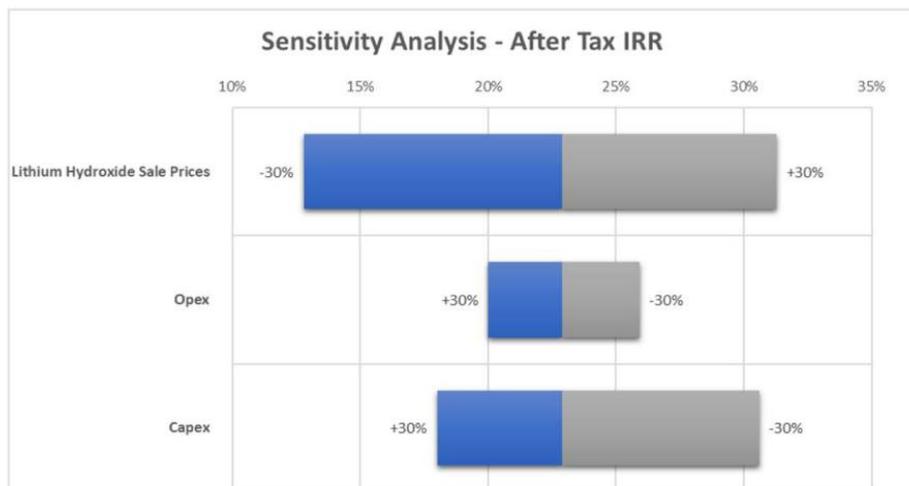




Figure 1-6 - Sensitivity Chart - After Tax IRR

The results are showing that the NPV and the IRR are:

Sensitive to Lithium Hydroxide selling price and the IRR is sensitive to variability in CAPEX cost

Less sensitive to variations in OPEX and process recovery

1.19 INTERPRETATION AND CONCLUSIONS

The following main interpretation and conclusions are summarized below:

- Sufficient data have been obtained through various exploration and sampling programs to support the geological interpretations of the lithium-bearing pegmatite deposit on the Property. The data are of sufficient quantity and reliability to reasonably support the resource estimates in this TRS.
- The Carolina Lithium project supports conventional and proven mining and spodumene concentration technology.
- The open pit, concentrator and converter plants have been designed and positioned to minimize the footprint.

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- The spodumene bearing ore will be extracted from open pits with in-pit crushing and conveying. Similarly, the open pit waste rock and the concentrator rejects will be co-disposed in dry state (after filtering of the concentrator rejects) with the usage of crushing and conveying equipment.
- The spodumene conversion to lithium hydroxide finish product is based on the technology developed and proposed by M:O.
- PLL is committed to execute all phases of the project in a socially responsible and environmentally responsible manner.
- The processing plants will recover water for re-use in processing to minimize the use of surface/underground water and reduce treated water discharge.

1.20 RECOMMENDATIONS

The following recommendations are summarized below by project areas:

Mineral Resources:

- Conduct infill drilling to increase data density and support the upgrading of Mineral Resources from Inferred to Indicated throughout the Project.
- Investigate shallow portions of Core Property deposits deemed amenable to early-stage mining through infill drilling and appropriate surface methods, at 20 m to 40 m spacings.
- Model the extent of major metavolcanic and metasedimentary host rock units to support mine planning at the Core property.
- Undertake a targeting study to identify new exploration targets and prioritize step-out drill targets that expand defined resource pegmatites.
- To support exploration targeting across its properties, and to direct future property acquisitions, Piedmont should continue to synthesize a mineral system model for spodumene bearing pegmatites along the Tin Spodumene Belt.

Ore Reserve and Mining Method:

- Additional property for waste storage must be acquired and added to the mine permit with the capacity to hold approximately 79 million tonnes.
- Some adjoining properties will need to be purchased and added to the mine permit to remove regulated offsets to obtain the tonnages shown in this feasibility study. It is believed that this is achievable before operations starts and costs have been included in the Mining Cost Model of this study.
- Continue to develop markets and cost analyses for ballast production from waste material.
- Further examine the long-range possibilities of using waste material for off-site projects.
- Evaluate permitting requirements and costs associated with mining through the northwest stream to combine Central Pit and North Pit.
- Research acquisition possibilities along the northeast, east, and southwest project boundaries for additional resource development, as well as added waste disposal areas.
- Complete a drilling program to convert inferred and indicated classification of the current resource to measured, especially in shallower areas of the deposit. This additional exploration will help add measured and indicated resource in the early years of mine production.
- Develop Central and Huffstetler Properties to an expanded level project site. Initial indications are that the Central Property may contain higher grade Li₂O possibilities, as compared to Core Property.

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- Finalize the mine permit and the rezoning permit for Core Property site.
- Refine cost estimates of contract mining services.
- Update project estimates and costs as drilling progresses and property acquisitions develop.

Metallurgical Testing and Recovery Methods:

It is recommended to complete on-going testwork programs which will be completed during 2022:

- Flotation process water treatment testing.
- Ore sorting testwork.

It is also recommended to further explore:

- Alternate mica and spodumene flotation reagents (chemistries and suppliers).
- Potential for by-products production from DMS tailings.
- Optical measurements on mica concentrates.
- Calcination and leaching testwork on variability program concentrate samples.

PLL is continuing to work both internally and externally to continue to further define their selected process technologies.

- Flotation testwork to eliminate kerosene and hydrofluoric acid.
- Further evaluate the concentrate quality (i.e. contained hematite) on conversion plant recoveries.

Project Infrastructure & layout:

- Evaluate the relocation of the concentrator closer to the conversion facility.
- Given the concentrate and analcime are being conveyed via overland conveyor to minimize truck movement, then changes to the layout are considered necessary, predominantly at the concentrator.
- Further evaluation of overland technologies and transfer methods should be undertaken.
- Implementing an ore sorting circuit to reduce production quality risks, is recommended and would also lead to a layout re-evaluation.
- Continue to optimize cost of construction of the project buildings (sizing and construction specifications).

Environment and Permitting:

- Respond to additional requests for information from DEMLR and other state agencies and continue to advance mine permit approvals.
- Prepare in advance for mine permit updates that will be required after receipt of the initial mine permit.
- Complete and submit a new air permit application for the proposed 30,000 t/y Carolina Lithium Project.
- Engage in further pre-application consultation with Gaston County in advance of rezoning and special use permit application submittals.

2 INTRODUCTION

Piedmont Lithium Inc. (Nasdaq: PLL; ASX: PLL) holds a 100% interest in the Carolina Lithium Project (the Project) located within the Carolina tin-spodumene belt (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, an area with easy access to infrastructure and power, has been described as one of the largest lithium regions

in the world and is located approximately 25 miles (40 km) West of Charlotte, North Carolina. PLL is pursuing the goal of becoming a strategic domestic supplier of lithium to the increasing electric vehicle and battery storage markets in the USA.

PLL is currently in an advanced study phase of the development of the project, with a completed Phase 5 drilling at its flagship project site located North of Bessemer City, NC. This resulted in a mineral resource estimate update (dated October 21st, 2021) performed by McGarry Geoconsulting which is integrated into this feasibility study.

Primero was requested by PLL to prepare a Definitive Feasibility Study (DFS) for the development of a mine operated with the in-pit crushing & conveying method, concentrator plant along with a LiOH conversion plant to convert the spodumene concentrate (SC6) to lithium hydroxide (LiOH). The economics of the project was developed to an accuracy level of +/-15% with contingencies of less than 10%.

2.1 STUDY PARTICIPANTS AND RESPONSIBILITIES

The following individuals and organizations have contributed to this document:

Table 2-1 - Report Contributors

Section	Description	Prepared By
1	Executive Summary	Primero
2	Introduction	Primero
3	Property Description	Primero and PLL
4	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Primero and McGarry Geoconsulting
5	History	Primero
6	Geological Setting, Mineralization and Deposit	McGarry Geoconsulting
7	Exploration	McGarry Geoconsulting
8	Sample Preparation, Analyses, and Security	McGarry Geoconsulting
9	Data Verification	McGarry Geoconsulting
10	Mineral Processing and Metallurgical Testing	Primero
11	Mineral Resource Estimates	McGarry Geoconsulting
12	Mineral Reserve Estimates	MM&A
13	Mining Methods	MM&A
14	Processing and Recovery Methods	Primero
15	Infrastructure	Primero and MM&A
16	Market Studies	Roskill and PLL
17	Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups	HDR and PLL
18	Capital and Operating Costs	Primero
19	Economic Model and Sensitivity Analysis	Primero
20	Adjacent Properties	Primero

21	Other Relevant Data and Information	Primero
22	Interpretation and Conclusions	Primero
23	Recommendations	Primero
24	References	Primero
25	Reliance on Information Provided by the Registrant	Primero

2.2 ABBREVIATIONS, ACRONYMS AND UNITS OF MEASURE

Table 2-2 – Abbreviations, Acronyms and Units of Measure

Symbol	Description
AREMA	American Railway Engineering and Maintenance of Way
B	Billion
BG	Battery Grade
CAPEX	Capital Expenditure

CSX	Railroad CSX
DMS	Dense Medium Separation
DMC	Dense Medium Cyclone
DFS	Definitive Feasibility Study
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
EBT	Earnings Before Taxes
IRR	Internal Rate of Return
LiOH	Lithium hydroxide monohydrate
ktpy	thousand tonnes (metric) per year
M	Million
MGG	McGarry Geoconsulting Corp.
MM&A	Marshall Miller & Associates, Inc.
MRE	Mineral Resource Estimate
MRL	North Carolina State University's Mineral Research Laboratory
Mtpy	Million tonnes (metric) per year
NCDEMLR	North Carolina Department of Energy, Mineral and Land Resources
NPAT	Net Profit After Tax
NPI	Non-Process Infrastructure
NPV	Net Present Value
OPEX	Operational Expenditure

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Symbol	Description
PFDs	Process Flow Diagrams
PFS	Pre-feasibility Study
PLL	Piedmont Lithium Inc.
Primero	Primero Group
SC6	Spodumene concentrate 6% Li ₂ O
SMP	Structural Mechanical and Piping
TG	Total grade
tpy	tonnes (metric) per year
TSB	Tin Spodumene Belt
\$	United States Dollars

2.3 BACKGROUND

The PLL Carolina Lithium Project is located in one of the premier regions in the world for lithium exploration, with favorable geology and ideal location with easy access to infrastructure, power, research and development centers for lithium and battery storage and major high-tech population centers.

The Carolina Lithium Project is in a rural area of Gaston County in North Carolina, USA (see Figure 3-1) approximately 44 km northwest of Charlotte, 16 km northeast of the town of Kings Mountain and 11 km southwest of the town of Lincolnton. The project is centered at approximately 35° 23' 20" N 81° 17' 20" W.

The property parcels are easily accessible through a paved secondary road bisecting the project area. Several small gravel roads traversable by truck allow further access into the properties. Interstate highway I-85 lies 13 km to the South and provides easy access to the city of Charlotte and the Charlotte Douglas international airport 30 km to the East. Charlotte is North Carolina's largest city.

As of December 31, 2021, the Project comprised approximately 3,237 total acres, of which 1,332 acres are claims on private property through option or deferred purchase agreements, 113 acres are under a long-term mineral leased agreement, 79 acres are under lease to own agreements, and 1,713 acres are owned by Piedmont. For the properties hosting the Mineral Resources in this report, Piedmont controls 100% of the surface and mineral rights per one or more agreement scenarios.

2.4 SCOPE OF WORK

The scope of work for the study was to deliver a CAPEX and OPEX estimate of ±15% accuracy, including an economic assessment and risk assessment.

The study considers the technical, engineering and cost elements of the project for the mine, concentrator and conversion plant production facilities.

The mine scope of work and description are covered in section 13 of this report.

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For the concentrator including the by-products facilities, process circuits were developed to a feasibility study level in terms of engineering deliverables.

2.4.1 Concentrator and by-product plants

For the concentrator and by-product plants, the study evaluated the following aspects of the project:

- The recent metallurgy test results (described in Section 10.0)
- The concentrator including:
 - Crushing (excluding the primary crusher) and screening;
 - Primary and secondary DMCs, screening and magnetic separation – coarse;
 - Primary and secondary DMCs, screening and magnetic separation – fines;
 - Upflow and screw classifiers;
 - DMC tailings thickener and filter;
 - Grinding;
 - Spodumene flotation;
 - Spodumene flotation concentrate thickener and filter;
 - Spodumene concentrate stockpile;
 - Flotation tails thickening and filter;
 - Reject stockpile;
 - Water (sources and distribution).
- Reagents;
- The by-product plant:
 - Magnetic separation;
 - Water (sources and distribution);
 - Reagents.
- Infrastructure requirements consisting of:
 - Reagent's facilities including unloading, storage and distribution to process;
 - Potable, fresh water and process water storage and distribution;
 - Fire pump set and reticulation;
 - Diesel storage and distribution;
 - Plant air services (compressed air facility);
 - 24 MVA connected power (for the concentrator and by-product plant) and reaching 30MVA including the mine area;
 - Communications (assumed available, needs further studies to confirm).
- The concentrator, by-product and conversion plant infrastructure is inclusive of:
 - All site preparation and earthworks including any construction laydown areas;
 - Electrical rooms and control rooms;
 - Non-process buildings;
 - Site roads and drainage within the processing plant;
 - Plant access and haul roads (by others);

The following inputs to the study have been provided by McGarry Geoconsulting group:

- Geology and MRE (Including Central, Core and Huffstetler).

The following inputs to the study have been provided by MM&A:

- Mining (including in-pit crushing, waste rock stockpiles, ROM pad and earthworks).

The following inputs to the study have been provided by PLL or its subconsultants:

- Environment and permitting;
- Metallurgical test work;
- Logistics;
- Manning;
- Marketing;

2.4.2 Lithium conversion plant

The conversion plant development assumes an EPC delivery model with a key technology partner providing the design and supply of the key process package. As such, Primero was provided with the estimated CAPEX and operational OPEX from Metso:Outotec for the key process -equipment package. Primero estimated the rest; earth works, foundation, SMP supply & installation, building and lab, power sub-station along with including owner's costs, working & sustaining capital, pre-production and contingencies.

2.4.3 Methodology

The feasibility study was undertaken by Primero, Metso:Outotec, MM&A, McGarry Geoconsulting and PLL and input for PLL's sub-consultants.

McGarry Geoconsulting were responsible for the geological development, update of the Core, Central and Huffstetler properties MRE and by-products MRE.

MM&A was responsible for the mining scope including the mine plan, optimization, mining CAPEX and OPEX.

SGS conducted the metallurgical test work program under guidance from PLL and assistance from Primero.

Metso:Outotec provided process design, capital, and operating cost figures for the lithium hydroxide conversion facilities.

Primero undertook the study management, process design and engineering, infrastructure requirements, capital and operating costs compilation, financial assessment, and report compilation.

2.4.4 Deliverables

The key deliverable is the DFS report that will enable the executive management of PLL to make decisions on advancing the project to the next level.

The definitive feasibility study update deliverables include:

- Updated Mineral Resource Estimate for Core, Central and Huffstetler properties and for by-products property per JORC 2012 and SK-1300 requirements;
- Mine plan and schedule;
- PFDs, process design criteria and mass balance;
- Mechanical equipment list;

- Plant layouts;
- Project schedule (preliminary plan and schedule of the execution phase);
- CAPEX and OPEX;
- Economic model;
- Feasibility study update report (this document).

2.4.5 Battery Limits

Primero's battery limits for the study scope are as follows:

Concentrator and by-products:

Feed	Coarse ore feed bin.
Tailings	Tailing's conveyor discharge.
SC6	Stockpiling and truck weighting.
Raw water	Inlet to raw water tank (pit dewatering and bore water supply by others).
Potable water	Connection at process plant fence.
Power	Main substation near plant fence.
Reagents	Resin, sodium carbonate, phosphate, hydrated lime, acid area, sodium hydroxide.
Communications	Communication panel in the main control room.

Communications	Communications panel in the main control room.
Utilities	Air, nitrogen, CO ₂ , natural gas, steam.

Conversion plant:

SC6 Feed	Feed into bin (provided by Metso:Outotec).
Civil/structural	Underside of baseplate and building.
Solid residues	Filter cake, slurry, screen overs (storage bunker & transport to tailings).
Effluent, water and slurry	Liquid effluent (outlet pipe flange), cooling water and condensate returns (single flanged connections).
Gaseous emissions	Process gas off take (outlet pipe flange, top of stack).
Product (LiOH)	Bagging, storage and shipping.
Water	Potable, demineralized, fresh for process and colling. Single flanged connections).
Electrical energy	Motors connected to equipment and grounding connectors in equipment.
Reagents	Feed into preparation bins and distribution systems.
Instrumentation	Connectors.
Utilities	Steam (HP and MP) (single flanged connections). Plant air, air, CO ₂ and sealing gas (single flange connections).

2.5 PERSONAL INSPECTIONS

The qualified persons responsible for the development of this TRS have visited the subject site on multiple occasions. The most recent visits by the qualified persons are summarized below.

MM&A. Representatives of MM&A have conducted site visits multiple times since 2018. MM&A has visited Piedmont's core processing facility multiple times, has visited exploration drill sites, and has also visited projected mining areas, outcrop locations, and sites of projected processing facilities.



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MGG. MGG Qualified Person, Leon McGarry (P.Geol), has undertaken multiple personal inspections of the property between 2017 and 2019 to review exploration sites, drill core and work practices. An initial site visit was made between 7 September and 8 September 2017. Data, drilling and geological records were found to be well maintained by PLI personnel and adherence to comprehensive field procedures developed by PLI was observed.

The outcome of site visits and subsequent remote review was the determination that controls to the mineralization are well-understood and that data has been collected in a manner that supports reporting Mineral Resource estimates for the Project in accordance with the JORC Code and SEC Regulation S-K 1300.

Primero. Representatives of Primero have conducted numerous site visits from 2018 to 2021. The Primero representatives viewed the core processing facility, outcrop locations and proposed processing plant locations.

2.6 UPDATES TO PREVIOUS TRS

This TRS serves as an amendment to a TRS filed in January 2022, effective December 31, 2021, following PLL's receipt of a comment letter from the SEC. Notable revisions and changes to the previously filed TRS include:

1. Includes various additional clarifications as requested by the SEC in a response letter to the previous filed TRS.
2. Replaces financial modeling with a "ore reserve only" plan as opposed to PLL's ultimate business plan which was originally presented. Financial modeling is based upon the sale of lithium hydroxide via the conversion of run-of-mine ore reserves to spodumene concentrate in the PLL's planned concentrator facility and ultimate sale of lithium hydroxide via the Company's planned conversion plant.
3. Removes byproducts from revenue projections.

It is stressed to the reader that this TRS maintains an effective date of 12/31/21 with regards to supporting technical and economic information, including, but not limited to: permit status, property control, cost based factors and revenue based factors.

3 PROPERTY DESCRIPTION

3.1 LOCATION

The Carolina Lithium Project is located in a rural area of Gaston County, North Carolina, USA (Figure 3-1), approximately 40 km northwest of Charlotte, North Carolina; 15 km northeast of the town of Kings Mountain, North Carolina; and 10 km southwest of the town of Lincolnton, North Carolina.

The Property is centered at approximately 35°23'20"N 81°17'20"W. The Project is located on United States Geological Survey (USGS) Quadrangles: Bessemer City, Lincolnton West and Lincolnton East. The coordinate system and datum for the modeling is UTM-17N, NAD-83.

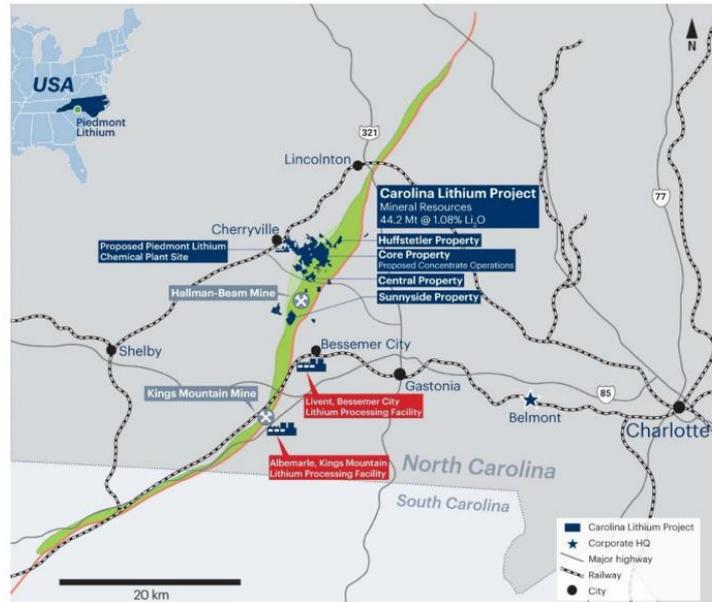
TECHNICAL REPORT SUMMARY
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Figure 3-1 - Carolina Lithium Project Location

3.2 TITLES, CLAIMS OR LEASES

Piedmont Property that is the subject of this Report as of December 31, 2021 comprise approximately 245 parcels totaling 3,237 total acres of which 128 parcels totaling 1,332 acres are claims on private property through option or deferred purchase agreements with landowners, 1 parcel containing 113 acres are under a long-term mineral leased agreements with private landowners, 2 parcels containing 79 acres are under lease to own agreements with private landowners, and 114 parcels containing 1,713 acres are owned by Piedmont Lithium and its subsidiaries and affiliates.

Private option agreements between Piedmont Lithium and its subsidiaries and the respective landowners grant Piedmont the exclusive and irrevocable right to access, enter and occupy each property for the purpose of mineral exploration and, upon exercise of the option, to either purchase the surface and mineral rights in fee simple for each property or enter into a long-term lease agreements with landowners including surface and mineral rights allowing Piedmont the right to mine the leased property.

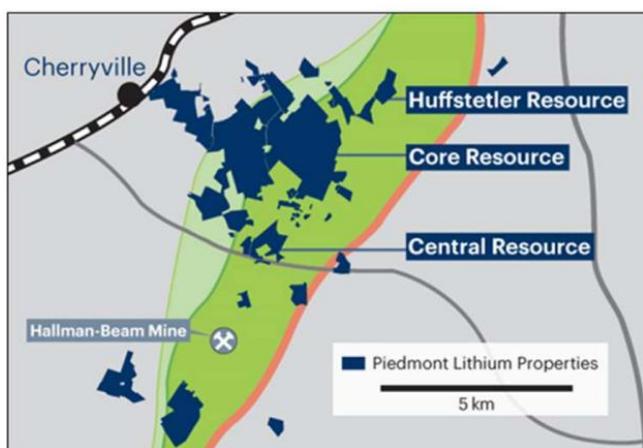


Figure 3-2 - Carolina Lithium Project land position as of December 31, 2021

For the properties hosting the MRE's in this report, PLL controls 100% of the surface and mineral rights per one or more of the agreement scenarios described above.

Table 31 below summarizes the surface and minerals rights per agreement type for all PLL properties.

Table 3-1 – Summary of land agreement type and acreage for all PLL properties

Agreement Type *	No. Parcels (qty.)	Surface Rights (acres)	Mineral Rights (acres)	Book Value (\$mm)
Option or Deferred Option Agreements	128	1,332	1,332	\$2.4
Long Term Mineral Lease Agreements	1	113	113	\$0.2
Lease to Own Agreements	2	79	79	\$1.1
Owned Properties	114	1,713	1,579	\$35.6
Total	245	3,237	3,103	\$39.3

*As of December 31, 2021

Competent/Qualified Persons have not carried out a separate title verification for the property and neither company has verified leases, deeds, surveys, or other property control instruments pertinent to the subject resources.

PLL has represented to its Competent/Qualified Persons that it controls the mining rights to the resources as shown on its property maps, and both MGG and MM&A have accepted these as being a true and accurate depiction of the mineral rights controlled by PLL. The TRS assumes the Property is developed under responsible and experienced management.

A detailed schedule of identifying each individual parcel controlled by the Company including ownership status, acreage, and book value will be included as an appendix to the TRS.

3.3 MINERAL RIGHTS

PLL supplied property control maps to MGG and MM&A related to properties for which mineral and/or surface property are controlled by PLL. While MGG and MM&A accepted these representations as being true and accurate, MGG and MM&A have no knowledge of past property boundary disputes or other concerns that would signal concern over future mining operations or development potential.

The concentrate operations and chemical plant are located entirely within private lands. Piedmont engaged Johnston, Allison & 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 DFS.

As of this report date, the Company's properties comprised approximately 3,245 acres of surface property and associated mineral rights in North Carolina, of which approximately 1,527 acres (114 parcels) are owned by Gaston Land Company, LLC, a subsidiary of the Company. Approximately 113 acres are subject to long-term lease (1 parcel; 1 individual landowner), approximately 79 acres are subject to lease-to-own agreements (2 parcels; 2 landowners), and approximately 1,526 acres are subject to exclusive option agreements (79 landowners; 124 land parcels). 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. The Company has made all required payments under each option agreement.

- Piedmont has received a Memorandum of Option or Memorandum of Contract signed by each landowner and each Memorandum is recorded in the Gaston County Register of Deeds. These Memoranda were recorded between September 2016 and October 2021.
- Title searches on all properties were completed prior to recording 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 the exception of real estate taxes, certain utility access and easements which do not materially impact Piedmont's option or purchase rights or ability to extract minerals from the land, and mortgage liens to be paid by the private landowner or subordinated to Piedmont's rights to the land and the minerals upon acquisition or long-term lease by Piedmont.

Legal mining rights may reflect a combination of fee or mineral ownership and fee or mineral leases through various surface and mineral lease agreements.

3.4 ENCUMBRANCES

No Title Encumbrances are known. By assignment, MGG and MM&A did not complete a query related to Title Encumbrances.

On August 31, 2021 PLL subsidiary Piedmont Lithium Carolinas, Inc. submitted a mining permit application to North Carolina's Division of Energy, Mineral and Land Resources. The application is under review as of the publication date of this report.

In order to undertake mining activities within Gaston County, North Carolina, properties must be zoned I-3 under the Gaston County Unified Development Ordinances. Additionally, mining and quarrying operations within Gaston



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County require a Special Use Permit approved by the Gaston County Board of Commissioners. As of the date of this report PLL has not submitted applications for I-3 zoning or for a Special Use Permit.

3.5 OTHER RISKS

There is always risk involved in property control. PLL has had its legal teams examine the deeds and title control in order to minimize the risk.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 TOPOGRAPHY, ELEVATION, AND VEGETATION

Topography of the area surrounding the Project is typical of the Piedmont Plateau characterized by relatively low, rolling hills. Several creeks bisect the property and are surrounded by flat, swampy floodplains that can extend up to 100 m away from the drainage channel. Surface elevations at the Project range from approximately 300 m above sea level in upland regions to approximately 220 m at stream level.

The area surrounding the Property is considered rural with a mixture of cleared farmland and forest in the temperate broadleaf category. Vegetation, where present, is a combination of large trees with smaller underbrush and is easily traversable by foot.

4.2 ACCESS AND TRANSPORT

General access to the Project is via a well-developed network of primary and secondary roads. Interstate highway I-85 lies 10 km to the south of the Project area and provides easy access to Charlotte Douglas International Airport 30 km to the east. A CSX-owned rail line borders the Property to the northwest (Figure 3-1).

4.3 PROXIMITY TO POPULATION CENTERS

Transport links provide access to Charlotte, North Carolina's largest city, within an hour's drive from the Project. The Charlotte metropolitan region has a 2020 population of 2.66 million people.

4.4 CLIMATE AND LENGTH OF OPERATING SEASON

North Carolina has a humid subtropical climate with short, mild winters and hot summers. The area around Lincolnton experiences summer temperatures ranging from approximately 20°C to 32°C, with July being the hottest month at an average maximum of 31.4°C. Winter temperatures tend to be close to freezing, with January being the coldest month at an average minimum temperature of -1.4°C. Average precipitation is around 120 cm and is evenly distributed throughout the year, with March being the wettest month with approximately 12 cm of rain. Average annual snowfall for the area totals less than 15 cm per year. The relatively mild climate allows for exploration year-round with little to no weather-related interruptions. Seasonal variations and weather events would be expected to have a small effect on the efficiency of surface mining and concentrator operations. Negative impacts would be on a limited basis and last less than a few days.

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4.5 INFRASTRUCTURE

There is a significant potential human resource available from towns in the vicinity of the Project, including skilled heavy machinery operators. The Charlotte metropolitan area is home to multiple universities providing for a highly skilled pool of talent.

A rail line borders the Property to the northwest. An electrical power infrastructure is already in place feeding power to nearby residents and property owners. Water is also accessible with a shallow water table and two convergent creeks running through the middle of the property.

Major transmission lines run immediately south of the Project with 11.5 GW of large scale, low-cost power, within 50 km from the Project. The Transcontinental Gas Pipeline runs through Bessemer City.

5 HISTORY

5.1 PREVIOUS LITHIUM MINING IN THE REGION

The Project lies within the Carolina tin-spodumene belt. Mining in the belt began in the 1950's with the Kings Mountain Mine, currently owned by Albemarle Corporation, and the Hallman-Beam mine near Bessemer City, currently owned by Martin Marietta Corporation. Both former mines are located within approximately 20 km of the Project to the south, near Bessemer City and Kings Mountain, respectively (Figure 3-1). Portions of the Project area were explored and excavated to shallow depths in the 1950's as the Murphy-Houser mine, owned by the Lithium Corporation of America (predecessor to Livent) (Cooley, 2010).

5.2 PREVIOUS EXPLORATION

In 2009, Vancouver based North Arrow Minerals Inc. ("North Arrow") commenced exploration at the property. North Arrow collected a total of 16 rock grab samples in the Core Property area, of which 14 returned above 1% Li₂O (Cooley, 2010). Extensive geological mapping outlined over 37 spodumene-bearing pegmatite dikes at the Core Property and confirmed localized historical trenching of these dikes by Lithium Corporation of America (Cooley, 2010). Geological mapping, which captured the location and visual estimate for spodumene, were used for drill hole targeting. North Arrow completed 19 diamond drillholes in 2009/2010. North Arrow subsequently terminated all their property agreement soon thereafter.

In 2016, Piedmont (formerly WCP Resources Limited) began optioning surface and mineral rights at the property. Piedmont commenced a renewed exploration effort at the Project which is detailed in Section 7.0 of this report.

6 GEOLOGICAL SETTINGS, MINERALIZATION AND DEPOSIT

6.1 REGIONAL, LOCAL AND PROPERTY GEOLOGY

The Project is situated in the Inner Piedmont belt near the Kings Mountain shear zone (Figure 3-1). The Inner Piedmont belt is characterized by Cambrian or Neoproterozoic gneisses, amphibolites, and schists of varying metamorphic grade. These rocks typically lack primary structures and the relationships amongst the rock types are generally undetermined. Several major intrusions occur in the Inner Piedmont, including the nearby Mississippian-aged Cherryville granite. Concurrent dike events extend from the granite, mainly to the east, with a strike that is sub-parallel to the northeast-trending Kings Mountain shear zone. As the dikes progress further from their sources, they become increasingly enriched in incompatible elements including lithium. The enriched pegmatitic dikes are located within a 3.5 km wide zone extending from the town of Kings Mountain through Lincolnton. This zone is known as the Carolina Tin-Spodumene Belt (TSB). As shown in Figure 3-1, the Project lies within the TSB.

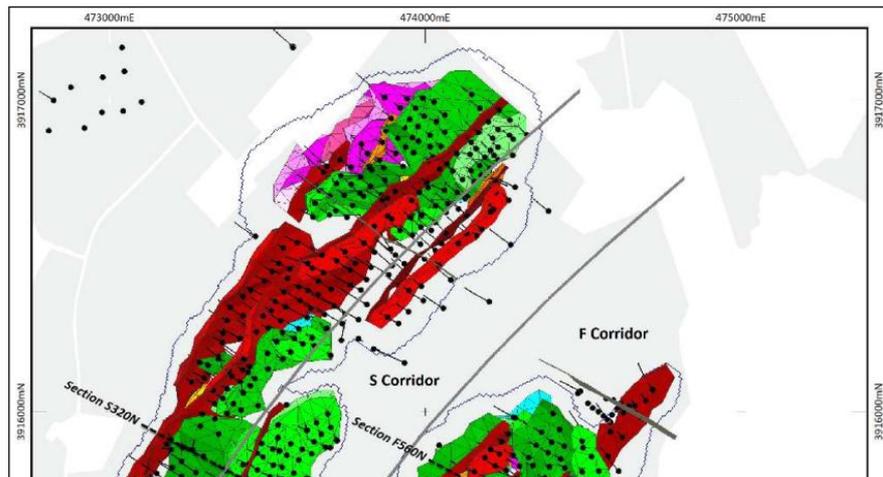
Spodumene pegmatites on the Property are hosted in a fine to medium grained, foliated biotite, hornblende, quartz feldspar gneiss commonly referred to as amphibolite, and metasedimentary rocks including shists and mudstones. The extent of major host rocks is shown in Figure 6-1. Massive to weakly foliated gabbro dikes are encountered over limited extents. Testing indicates that the metasedimentary rocks have the potential to generate acidic conditions.

Pegmatites at the Project include spodumene-bearing and spodumene-free dikes. Spodumene-bearing dikes host the lithium and by-product mineral deposits at the Project.

Spodumene-free pegmatite dikes have variable orientations. Some share the same trend as the spodumene-bearing dikes and in some instances, there is a gradational contact between them. Spodumene-free pegmatite dikes represent either: an early stage (pre-spodumene) fractionated magma; or a later barren pegmatite system. Intervals logged as barren pegmatite can also represent altered portions of the spodumene-bearing pegmatite.

On the Core Property, spodumene-bearing pegmatites are cut by steeply dipping west-northwest trending diabase dikes of 5 m to 10 m thickness at a coordinate northing of approximately 3,916,600 m (Figure 6-1).

A schematic stratigraphic column representing the geological setting of the Carolina Lithium Project is presented in Figure 6-2.



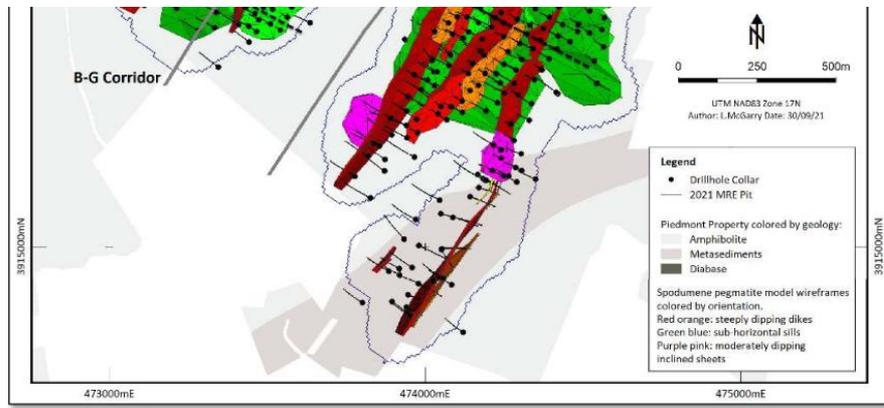


Figure 6-1 - Plan View of Core Property Lithology and Mineralized Pegmatite Dikes

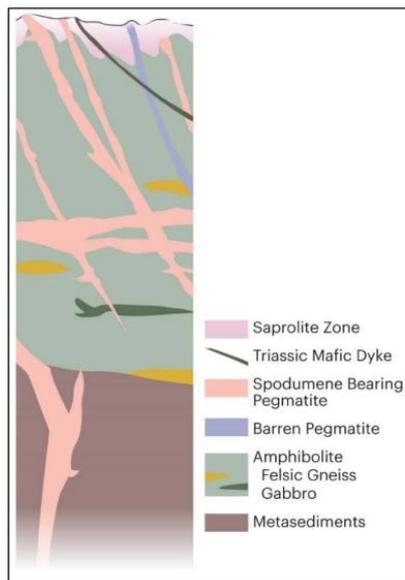


Figure 6-2 - Stratigraphic Column – Carolina Lithium Project

6.2 MINERALIZATION

The spodumene-bearing pegmatites are un-zoned having no apparent systematic variation in primary mineralogy and range from fine grained (aplite) to very coarse-grained. Primary mineralogy consists of spodumene, quartz, plagioclase, potassium-feldspar, and muscovite. Table 6-1 presents average compositional mineral proportions derived from normative mineralogy calculations on X-ray Fluorescence (XRF) drill core assay data.

Table 6-1 - Average Compositional Mineral Proportions for Spodumene-bearing Pegmatites

Mineral	Compositional Average (%)		
	Core	Central	Huffstetler
Spodumene	13.6	16.7	11.8
Quartz	29.4	29.4	28.8
Albite	35.7	35.6	36.4
K-spar	9.7	8.9	12.2
Muscovite	4.3	3.7	3.2
Biotite	1.9	1.6	3.4
Residual	5.5	4.1	4.1

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6.3 ALTERATION

Several types of alteration are observed at the Project. Within the amphibolite and metasedimentary host rock, the most common types of alteration are chlorite, epidote, and potassic alteration.

Holmquistite alteration of the amphibolite occurs as a metasomatic replacement at the margins of lithium rich pegmatites. At the Project, holmquistite alteration is distinguished by a light blue color and acicular habit (Figure 6-3) and is observed as both small veinlets and massive zones that usually occur within 2 m of the contact between amphibolite and spodumene pegmatite (Piedmont Lithium, 2017).

Within the spodumene pegmatites, spodumene shows varying alteration intensity from fresh to complete replacement. Spodumene is typically altered to a greater degree than other compositional minerals. The most common types of spodumene alteration are clay, muscovite, and feldspar replacement (Piedmont Lithium, 2017). The distinguishing features of clay alteration of spodumene are the softness and lack of cleavage planes in the spodumene crystals. Muscovite alteration of spodumene results in pseudomorphs of muscovite after spodumene (Figure 6-4).



Left: Sample of massive holmquistite showing asbestiform habit (hole 17-BD-54, 94.73–94.90 m).

Right: Sample of amphibolite with vein of blue-colored holmquistite (hole 17-BD-82 94.49–94.59 m).

Figure 6-3 - Examples of Holmquistite



Note – Picture is from Hole 17-BD-121 72.24–72.44 m

Figure 6-4 - Pegmatite showing Pseudomorphs of Muscovite after Spodumene

6.4 DEPOSITS

6.4.1 Core

Spodumene-bearing pegmatites on the Core Property are assigned to three major corridors shown in Figure 6-1: the B-G corridor and S corridor (cross section view in Figure 6-5) and the F corridor (cross section view in Figure 6-6). Corridors extend over a strike length of up to 2 km and commonly have a set of thicker dikes of 10 m to 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.

At the Core property, dikes are commonly interconnected by flat to shallow-dipping sills and inclined sheets that are encountered over broad lateral extents but rarely outcrop at surface. These sills and sheets are tested by drilling over 600 m along strike and 500 m down dip where they remain open and can be projected between major corridors as shown in Figure 6-5 and Figure 6-6. The true thickness of individual sills and inclined sheets range from 1 m to 18 m. A representative closely spaced series of sills and inclined sheets typically has a cumulative thickness greater than 10 m.

Spodumene-bearing pegmatites, or a closely spaced series of such pegmatites, can be traced between drillhole intercepts and surface outcrops for over 1.7 km. Although individual units may pinch out, the deposit is open at depth. The Mineral Resource has a maximum vertical depth of 210 m from surface. Ninety-two (92) percent of the Mineral Resource is within 150 m of the topography surface.

6.4.2 Central

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 10 m to 20 m true thickness dikes (see inset plan map in Figure 6-7). These major dikes strike northeast and dip steeply to the southeast. Dikes are intersected by drilling to a depth of 225 m down dip (Figure 6-7). Although individual pegmatite bodies may pinch out, the deposit is open along strike and down dip and is primarily confined by the property boundary. The Central mineral resource has a maximum vertical depth of 275 m below surface. On average, the model extends to 200 m below surface. Seventy-five (75) percent of the Central Mineral Resource model is within 150 m of the topography surface.

6.4.3 Huffstetler

Spodumene-bearing pegmatites on the Huffstetler Property fall within a corridor that extends over a strike length of up to 0.4 km (see inset plan map in Figure 6-8) and form a stacked series of inclined sheets that range from 2 m to 18 m true thickness (Figure 6-8). 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 southeastern edge of the permit boundary. Although individual units may pinch out, the deposit is open at depth and along strike. The Huffstetler Mineral Resource has a maximum vertical depth of 150 m below the ground surface.

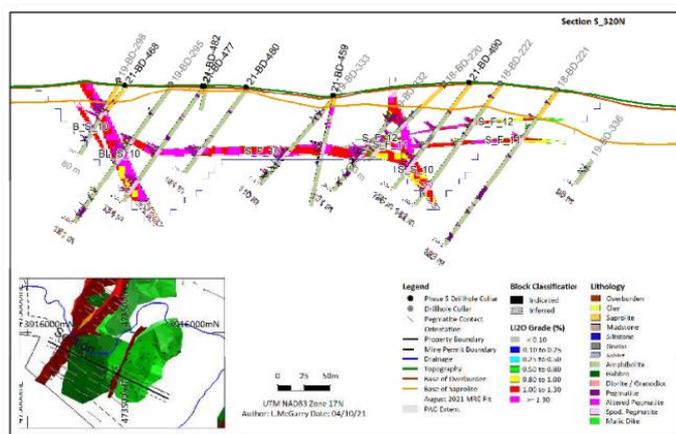


Figure 6-5 - Cross section of Steep Dikes at Core B-G Corridor and S Corridor Connected by a Sill

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7 EXPLORATION

7.1 NATURE AND EXTENT OF EXPLORATION

Extensive exploration supports this resource estimate and is comprised of surface mapping and extensive subsurface drilling carried out on the Property. Exploration has predominantly been carried out by PLL, with a small number of initial exploratory holes completed by North Arrow. PLL's exploration of the Property has been carried out by professional geologists in adherence to established operating procedures that have been verified by the QP. To date, exploration has been concentrated on the Core, Central and Huffstetler deposit areas detailed below.

7.1.1 Core Property

As of the 3 August 2021 cut-off date, 542 core holes totaling 80,029 m had been drilled at the Core Property. Table 7-1 shows the breakdown of drilling about the historical drilling completed by North Arrow and the subsequent drilling programs completed by PLL which include 505 diamond core holes and 18 sonically drilled holes. The extent of drilling at the Core property is shown in Figure 7-1.

Table 7-1: Core Drilling Campaigns and Historical Data Included in the Core Property MRE

Year(s)	Company	Phase	No. of holes	Hole size*	Meters	Hole ID (from)	Hole ID (to)
2009–2010	North Arrow	Historical	19	HQ/NQ	2,544	09-BD-01	10-BD-19
2017	Piedmont	Phase 1	12	HQ/NQ	1,667	17-BD-20	17-BD-31
2017	Piedmont	Phase 2	93	HQ/NQ	12,408	17-BD-32	17-BD-124
2017–2018	Piedmont	Phase 3	124	HQ/NQ	21,530	17-BD-125	18-BD-248
2018–2020	Piedmont	Phase 4	90	HQ/NQ	14,766	17-BD-249	19-BD-338
2020–2021	Piedmont	Phase 5	186	HQ/NQ	26,825	20-BD-339	21-BD-524
2020	Piedmont	Phase 5	18	Sonic	289	20-SBD-001	20-SBD-0018
ALL	Piedmont	Total	542	HQ/NQ	80,029	09-BD-01	21-BD-524

At the cut-off date, lithology data were available for all holes up to and including drillhole 21-BD-524. Assay results were available up to and including drill hole 21-BD-491, drill hole 21-BD-494, and drillholes 21-BD-496 to 21-BD-502.

7.1.2 Central Property

At the cut-off date, 36 diamond core holes totaling 5,563 m had been drilled at the Central property as detailed in Table 7-2. The extent of drilling at the Central property is shown in Figure 7-2.

Table 7-2 - Core drilling campaigns and historical data included in the Central Property MRE

Year(s)	Company	Phase	No. of holes	Hole size*	Meters	Hole ID (from)	Hole ID (to)
2018–2019	Piedmont	Phase 4	30	HQ/NQ	4,675	18-CT-001	19-CT-030
2020–2021	Piedmont	Phase 5	6	HQ/NQ	888	20-CT-031	20-CT-036
ALL	Piedmont	Total	36	HQ/NQ	5,563	18-CT-001	20-CT-036

7.1.3 Huffstetler Property

At the cut-off date, 14 diamond core holes totaling 2,151 m had been drilled at the Huffstetler Property as detailed Table 7-3. The extent of drilling at the Huffstetler Property is shown in Figure 7-3.

Table 7-3 - Core drilling campaigns and historical data included in the Huffstetler Property MRE

Year(s)	Company	Phase	No. of holes	Hole size	Meters	Hole ID (from)	Hole ID (to)
2020	Piedmont	Phase 5	14	HQ/NQ	2,151	20-HF-001	20-HF-0014

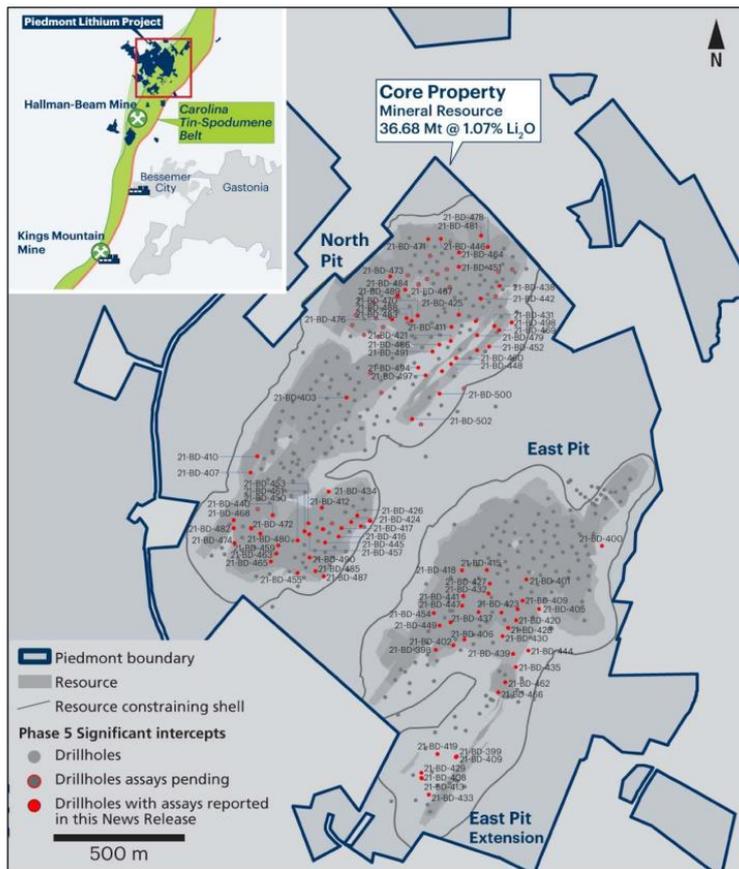


Figure 7-1 - Extent of drilling at the Core property

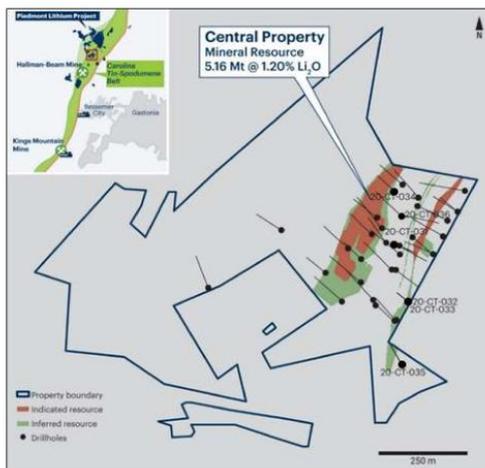


Figure 7-2 - Extent of drilling at the Central property

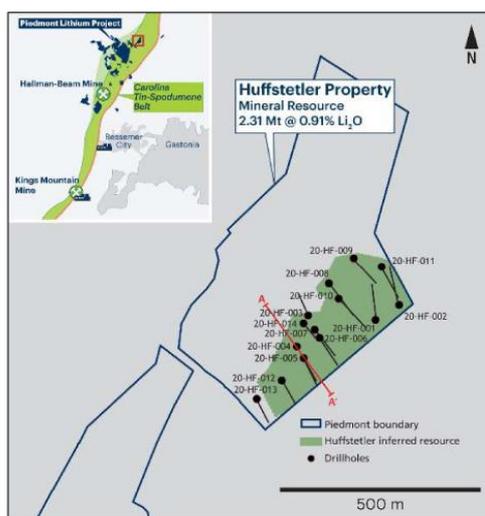


Figure 7-3 - Extent of drilling at the Huffstetler property

7.2 NON-DRILLING PROCEDURES AND PARAMETERS

Non-drilling exploration procedures included testing of soil samples and surface rock exposures, geologic mapping, and surface geophysics surveying. The soil sampling program, along with surface rock sampling and mapping, proved successful in identifying high priority drill targets for spodumene-bearing pegmatites. Soil and rock testing, as well as geologic mapping, results were only used as prospecting tools and are not included as data points for the resource estimate.

Soil testing to identify blind spodumene-bearing pegmatite dikes involved collection, documentation, and laboratory testing of 2,410 soil samples from numerous test lines across PLL's properties. The soil sampling was initially calibrated in areas known to contain spodumene-bearing pegmatites, and then subsequently used as a guide for planning core drilling locations as exploration progressed. Soil samples were collected using a hand-operated soil auger from depths ranging from six to 36 inches below top of ground. Lithium assays ranged from below detection limit (*BDL*) to 2,306 ppm.

Rock collected and tested included float, subcrop and outcrop samples. These occurrences ranged in size from fist-size float to meter-scale subcrop blocks. Lithium values from the samples ranged from 0.01% Li_2O to 4.37% Li_2O . Locations of the samples were recorded with a handheld GPS unit. Outcrop was observed to exist predominantly associated with moderately southeast-dipping pegmatites. The presence of spodumene in surface exposures was found to be indicative of spodumene down-dip. Mapping and testing of the surface exposures were only used as prospecting tools and are not included as data points for the mineral resource estimate.

Geophysics, in the form of a ground magnetic survey, totaling 43.05 line-km, was conducted over Core and Central properties with a minimum of 40 m line spacing. The ground magnetic survey was marginal, at best, in identifying pegmatites.

7.3 DRILLING PROCEDURES

7.3.1 North Arrow

North Arrow completed a total of 2,544 m of core drilling in 19 drillholes in programs conducted in the fall of 2009 and spring of 2010. Drill cores were recovered as HQ for weathered bedrock (saprolite) with high clay content and as NQ for deeper un-weathered bedrock. The dip of the drill hole at depth was measured with up to four acid tests per hole.

Descriptions of the drill core were logged and are stored digitally. The drill logs include notes on the lithological units, alteration, estimated amount of spodumene mineralization in pegmatite units, textures, grain size, and magnetic susceptibility.

7.3.2 Piedmont

PLL has completed a total of 85,199 m of core drilling in 574 drillholes at the Core, Central and Huffstetler properties. Drilling was conducted in five phases from 2017 to 2021.

All diamond drillholes were collared with HQ and were transitioned to NQ once non-weathered and unoxidized bedrock was encountered. Oriented core was collected by a qualified geologist at the drill rig from 103 drillholes using the Reflex ACT III tool. Orientated core measurements were collected for lithology contact, foliation, vein, fault, shear, and fold plane angles. Downhole surveying was performed on each hole using a Reflex EZ-Trac multi-

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shot instrument. Readings were taken approximately every 15 m that recorded depth, azimuth, and inclination. Drill collars were located with the differential global positioning system (GPS) with the Trimble Geo 7 unit which resulted in accuracies of less than 1 m.

Geological data was collected in sufficient detail to aid in Mineral Resource estimation. Core logging consisted of marking the core, describing lithologies, geologic features, percentage of spodumene and structural features measured to core axis. The core was photographed wet before logging and again immediately before sampling with the sample numbers visible. All the core from the 574 holes reported was logged.

7.4 HYDROLOGY AND HYDROGEOLOGY

Hydrogeological assessment for the project was completed by HDR, Inc. (HDR). The tasks involved included surface water and groundwater quality monitoring; streamflow monitoring; pump testing; groundwater level monitoring; and creation of a groundwater model using MODFLOW. MM&A has received and reviewed memorandums and data summaries from HDR. HDR reports on the hydrogeology of the project area include "Technical Memorandum: Aquifer Test, Piedmont Lithium – Gaston County, North Carolina" (revised version submitted February 18, 2019) and "Technical Memorandum: Groundwater Model, Piedmont Lithium – Gaston County, North Carolina" (submitted June 28, 2019). An additional groundwater modeling report, titled "Technical Memorandum: Groundwater Model – Piedmont Lithium, Gaston County, North Carolina", was also completed by HDR in August 2021.

HDR's groundwater modeling results form a basis for selection of pit dewatering equipment and operating cost considerations. The project will involve pumping from two pits simultaneously at times throughout the mine life, with pumping rates varying depending on the stage of mining and pits being excavated. The predicted dewatering rates range from 575 gallons per minute (gpm) in the first year to maximum pumping rates of 2,300 gpm and 2,000 gpm in years 2 and 12, respectively. The estimated average for the mine life is on the order of 1,400 gpm.

7.5 GEOTECHNICAL DATA

MM&A has completed geotechnical characterization and pit slope stability assessment tasks including basic laboratory rock strength testing, discontinuity orientation data collection, kinematic bench-scale stability assessment, and overall pit slope stability assessment. The pit slope stability assessment, initially completed in 2019 and supplemented in 2021, provides guidance with regard to bench, inter-ramp, and overall pit slope for pit design. In January 2021, MM&A conducted additional geotechnical drilling and data collection for specific areas of the planned pits. Results of the geotechnical assessment yielded recommendations for an overall pit wall angle of 51 degrees assuming a bench angle of 75 degrees, a final bench height of 24 m, a final berm width of 9.5 m, and a single 30 m haul road ramp width.

8 SAMPLE PREPARATION, ANALYSIS & SECURITY

8.1 SAMPLE COLLECTION AND SECURITY

Diamond drill core was cut in half with a diamond saw. Standard sample intervals were a minimum of 0.35 m and a maximum of 1.5 m for both HQ and NQ drill core, taking into account lithological boundaries (i.e., sampled to, and not across, major contacts). Core was cut in half with a diamond saw.

Samples were numbered sequentially with no duplicates and no missing numbers. Triple tag books using nine-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.

Drill core samples and surface rock 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 to maintain chain of custody. 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.

8.2 SAMPLING TECHNIQUE AND SAMPLE PREPARATION

8.2.1 North Arrow

Historical samples (holes 09-BD-01 through 10-BD-19) were submitted to the commercial independent laboratory **Acme Analytical Laboratories (AcmeLabs)** in Vancouver for analysis. AcmeLabs was accredited with ISO/IEC 17025 by the Standards Council of Canada (SCC) for the methods employed. Each sample was subjected to: a four-acid digestion and analysis for 40 elements (including lithium) using a combination of ICP-ES (inductively coupled plasma emission spectrometry) and ICP-MS (inductively coupled plasma mass spectrometry) methods (Acme method 7TX); or sodium peroxide fusion and lithium analysis by ICP-ES (Acme method 7PF-Li).

8.2.2 Piedmont Phase I Exploration

Piedmont Phase 1 samples were shipped to the independent commercial laboratory **Bureau Veritas Minerals Laboratory (BV)** in Reno, Nevada. BV is accredited with ISL-certification for the methods employed.

- The preparation code was PRP70-250 (crush to 70% of sample <2 mm, pulverize 250 g to 85% <75 µm);
- The analysis code was MA270 (multi-acid digestion with either an ICP-ES or ICP-MS finish), which has a range for Li of 0.5% to 10,000 ppm (1% Li). This digestion provides only partial analyses for many elements in refractory minerals, including Ta and Nb. It does not include analyses for Cs;
- The over-range method code for Li >10,000 ppm is PF370, which uses a peroxide fusion with an ICP-ES finish and has lower and upper detection limits of 0.001% and 50%, respectively. The laboratory was instructed to implement the over-range method in all samples that exceed 5,000 ppm Li to allow for poor data precision near the upper limit of detection using MA270.

8.2.3 Piedmont Phase 2 to Phase 5 Exploration

All surface and drill core rock samples were shipped to the independent commercial laboratory **SGS Minerals - Lakefield (SGS)**, Ontario, Canada. SGS is accredited with ISO/IEC 17025 certification and has a Quality Management System that conforms to ISO 9001:

- Prior to 2020, the preparation code was CRU21 (crush to 75% of sample <2mm). Starting in 2020 the code was changed to CRU16 (crush to 90% of sample <2 mm). The pulverization code remains PUL45 (pulverize 250g to 85% <75 µm);

- Prior to August 2017 the analysis code was GE ICM40B (multi-acid digestion with either an ICP-ES or ICP MS finish), which has a range for Li of 1 to 10,000 (1%) ppm Li;
- Starting in August 2017, samples were analyzed using GE ICP91A Li only. The over-range method code for Li >5,000 ppm is GE ICP90A, which uses a peroxide fusion with an ICP finish, and has lower and upper detection limits of 0.001% and 5% respectively;
- In 2020, the analysis code was changed to GE ICP92A50, which uses a peroxide fusion with an ICP finish, and has lower and upper detection limits of 0.001% and 5% respectively.

Soil samples

Soil samples were analyzed using GE_ICM40B (49 element ICP package) at SGS Laboratories in Lakefield, Ontario & Burnaby, British Columbia. Blanks and certified standard materials (CRM's) were inserted at the recommended rate.

Bulk Density

Bulk density measurements for Phase 2 drilling were made on each drillhole (one host rock and one mineralized rock) at SGS using the immersion method analyses code GPHY04V. Saturated and dry bulk densities for Phase 3, Phase 4 and Phase 5 drill programs were collected by Piedmont geologists using a triple beam scale and the

Phase 4 and Phase 5 drill programs were collected by Piedmont geologists using a triple beam scale and the immersion method.

X-Ray Fluorescence

Upon completion of Phase 3 drill sample lithium analysis, sample intervals falling within the Core Property deposit model were identified for subsequent whole rock analysis by SGS using borate fusion followed with XRF (SGS analysis code GO XRF76V). The same analytical procedure was used for whole rock analysis of all Phase 4 and Phase 5 drill core containing spodumene-bearing pegmatite at the Core, Central and Huffstetler properties.

Normative Mineralogy Calculations

Normative mineralogy was calculated from total fusion 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 three QEMSCAN analyses of composite samples prepared for metallurgical test work.

8.3 QA/QC CONTROLS

Examination of the QA/QC sample data obtained by PLL and North Arrow indicates satisfactory performance of field sampling protocols and assay laboratories providing acceptable levels of precision and accuracy.

Based on an assessment of the data, the Qualified Person considers the entire dataset to be acceptable for resource estimation with assaying posing minimal risk to the overall confidence level of the MRE.



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8.3.1 North Arrow

Data quality was monitored through the submission of coarse blank (marble) material and two company Standard Reference Materials (SRMs) produced from spodumene concentrates from the Tanco Li-Cs-Ta (LCT) pegmatite mine, Manitoba, Canada (Arne, 2016). Marble was used as coarse blank material submitted with the core samples (Arne, 2016). No duplicate were collected during the program.

A review undertaken by independent consulting geochemist Dennis Arne in 2016 found that *“The standard reference materials used by North Arrow Minerals and AcmeLabs have returned acceptable results within their control limits. There is evidence for only slight possible cross contamination of Li between samples”* but that *“the cross-contamination has not been of a significant level”*.

8.3.2 Piedmont

PLL has maintained QA/QC protocols and surveillance of CRM, blank and duplicate sample results during all exploration phases. PLL QA/QC data undergo regular independent review by consulting geochemist Dennis Arne. The following section contains a summary of information provided in Arne (2017, 2017a, 2018, 2018b, 2019, 2019b, 2021 and 2021a).

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, Australia. 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. Marble was used as coarse blank material submitted with the core samples.

Sampling precision was monitored by selecting a sample interval likely to be mineralized and splitting the sample into two quarter-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 1:20 samples when sampling mineralized drill core intervals.

Random sampling precision was monitored by splitting samples at the sample crushing stage (coarse crush duplicate) and at the final subsampling 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.

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9 DATA VERIFICATION

9.1 PROCEDURES OF QUALIFIED PERSON

MGG's QP Leon McGarry visited the site during 2017, 2018 and 2019 to review exploration sites, drill core and work practices. An initial site visit was made between 7 September and 8 September 2017. Visual validation of mineralization against assay results was undertaken for several holes. Verification core samples were collected by Leon McGarry.

9.1.1 Data Import and Validation

All drill hole data was imported into Micromine™ software version 15.08. Validation of the data was then completed which included checks for:

- Logical integrity checks of drillhole deviation rates;
- Presence of data beyond the hole depth maximum;
- Overlapping from-to errors within interval data.

Visual validation checks were also made for obviously spurious collar coordinates or downhole survey values.

9.2 LIMITATIONS

Travel to the site was curtailed during 2020 and 2021 due to the impact of the COVID-19 pandemic which limited the QP's ability to independently verify aspects of Phase 5 exploration that required personal inspection. This limitation was mitigated by remote monitoring of exploration activities via regular video conferencing and through review of core photography. The QP did undertake personal inspections from 2017 to 2019 to verify exploration phases 1 to 4.

As with any exploration program, localized anomalies cannot always be discovered. The greater the density of the samples taken, the less the risk. Once an area is identified as being of interest for inclusion in the mine plan, additional samples are taken to help reduce the risk in those specific areas.

9.3 OPINION OF QUALIFIED PERSON

Sufficient data have been obtained through various exploration and sampling programs to support the geological interpretations at the Property. The data are of sufficient quantity and reliability to reasonably support the lithium resource estimates in this TRS.

10 MINERAL PROCESSING AND METALLURGICAL TESTING

The following metallurgical testwork programs have been undertaken for the Carolina Lithium Project:

- Bench-scale beneficiation of spodumene and by-products (Minerals Research Laboratory (MRL), NC State University, 2018);
- Concentrator Variability Testwork (SGS Canada Inc., 2019);
- Concentrate Production (SGS Canada Inc., 2020);
- Conversion Testwork (SGS Canada Inc., 2020);
- Concentrator Pilot Plant (SGS Canada Inc., 2020);
- Concentrator Variability Testwork (SGS Canada Inc., 2021);
- Conversion Pilot Plant (Metso:Outotec 2021).

This report presents the details of the 2021 Metallurgical Testwork Program performed by SGS Canada Inc. and Metso:Outotec only. All previous testwork programs can be found in the Primero technical report entitled “Scoping Study Update Report – Ref 18605-REP-GE-001– Carolina Lithium Project” dated September 10, 2021.

10.1 SAMPLE SELECTION

A metallurgical testwork program was undertaken at SGS Canada Inc. in Lakefield, Ontario during 2021 on nine variability samples from the Piedmont Lithium Project. The testwork program included sample characterization, heavy liquid separation (HLS), Reflux classifier testing, dense media separation (DMS), and batch and locked-cycle flotation testing.

The samples were produced from drill core. The samples were taken from the South and East pits and represented material that would be mined in the early years of operation (i.e., years 1 to 10). Each sample contained both pegmatite and host rock (dilution). The samples typically contained elevated proportions of host rock relative to the anticipated levels of dilution (10%) in the mine plan. Table 10-1 gives a description of each sample and the abbreviated sample name (short name). The samples generally contained amphibolite host rock dilution. Two samples from the East pit extension included meta-sediments host rock.

Table 10-1 - Variability Sample Description

Name	Short Name	Description
East Pit Early Flat 1	E_EF1	Overall, it was estimated that the pegmatite portion of the sample contained 17% spodumene mineralization where 95% occurs as coarse grain, white to light green spodumene and 5% occurs as fine grain, white spodumene. Strong oxidized zones were present along with weak muscovite alteration at upper and lower contacts. The waste rock consisted of amphibolite that had moderate biotite alteration which locally hosts millimeter-scale holmquistite veinlets at or near the pegmatite contacts, and red-orange clay saprolite.
East Pit Early Flat 2	E_EF2	Overall, it was estimated that the pegmatite portion of the sample contained 15% spodumene mineralization where 90% occurs as coarse grain, white to light green spodumene and 10% occurs as fine grain, white spodumene. Moderate muscovite alteration was present at upper and lower contacts. The waste rock, amphibolite had moderate biotite alteration which locally hosts millimeter-scale holmquistite veinlets at or near the pegmatite contacts.
East Pit Early Steep	E_S	Overall, it was estimated that the pegmatite portion of the sample contained 18% spodumene mineralization where 60% occurs as coarse grain, light green spodumene and 40% occurs as fine grain, white to light green spodumene. Weak oxidized zones were present along with moderate muscovite alteration at upper and lower contacts. The waste rock, amphibolite had moderate biotite alteration.

Name	Short Name	Description
East Pit Late Flat	E_LF	Overall, it was estimated that the pegmatite portion of the sample contained 15% spodumene mineralization where 95% occurs as coarse grain, white to light green spodumene and 5% occurs as fine grain, white spodumene. Weak muscovite alteration was present at upper and lower contacts. The waste rock, amphibolite had weak biotite alteration which locally hosts millimeter-scale holmquistite veinlets at or near the pegmatite contacts.
East Pit Late Low Grade	E_LG	Overall, it was estimated that the pegmatite portion of the sample contained 14% spodumene mineralization where 80% occurs as coarse grain, light green to green spodumene, 5% occurs as medium grain, light green spodumene, and 15% occurs as fine grain, white spodumene. Weak muscovite alteration was present at upper and lower contacts and in patches throughout the pegmatite. The waste rock, amphibolite had moderate biotite alteration.
East Pit Extension High Grade	EE_HG	Overall, it was estimated that the pegmatite portion of the sample contained 20% spodumene mineralization where 30% occurs as coarse grain, white to light green spodumene, 20% occurs as medium grain, light green spodumene, and 50% occurs as fine grain, white spodumene. The waste rock consisted of meta-sediments (biotite schist).
East Pit Extension Low Grade	EE_LG	Overall, it was estimated that the pegmatite portion of the sample contained 12% spodumene mineralization where 40% occurs as coarse grain, light green to green spodumene, 15% occurs as medium grain, light green spodumene, and 45% occurs as fine grain, white spodumene. Weak oxidized zones were present along with weak muscovite alteration at upper and lower contacts. The waste rock consisted of amphibolite that had moderate biotite alteration which locally hosts millimeter-scale holmquistite veinlets at or near the pegmatite contacts, weathered amphibolite saprock, and meta-sediments (biotite schist and meta-mudstone).
South Pit Lower Flat	S_F	Overall, it was estimated that the pegmatite portion of the sample contained 25% spodumene mineralization where 90% occurs as coarse grain, white to light green spodumene, 10% occurs as fine grain, white spodumene, and <1% occurs as coarse grain light purple spodumene. Weak muscovite alteration was present at upper and lower contacts. The waste rock, amphibolite had moderate biotite alteration which locally hosts millimeter-scale holmquistite veinlets at or near the pegmatite contacts and local coarse grain tourmaline.

South Pit Upper Steep	S_S	Overall, it was estimated that the pegmatite portion of the sample contained 17% spodumene mineralization where 50% occurs as coarse grain, white to light green spodumene and 50% occurs as fine grain, white spodumene. Moderate oxidized zones were present along with weak muscovite alteration at upper and lower contacts. The waste rock, amphibolite had moderate biotite alteration.
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Figure 10-1 shows the locations of the drill core samples used to produce the variability samples shown against the wireframes of the pegmatite dykes.

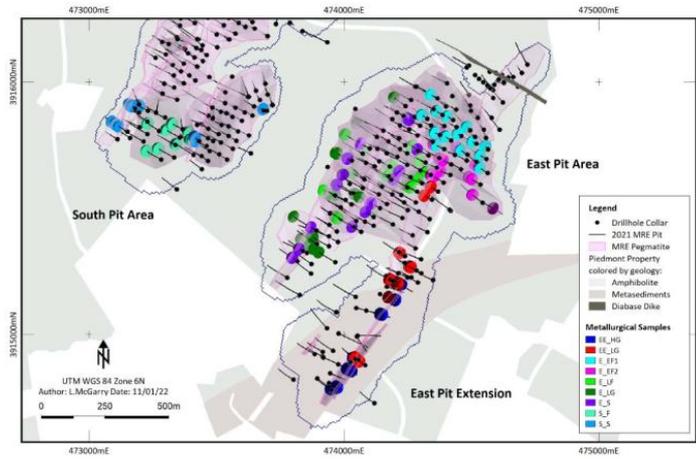


Figure 10-1 - Location of drill core sample from the East pit to produce Variability samples

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10.2 SAMPLE CHARACTERIZATION

Each sample contained pegmatite and host rock which were delivered as separate samples to SGS. The pegmatite and host rock were each assayed individually and analyzed by X-ray diffraction. Table 10-2 and Table 10-3 show semi-quantitative mineralogy of the pegmatite and host rock, respectively, for each variability sample as determined using the Reference Intensity Ratio (RIR) method.

Spodumene content in the pegmatite samples ranged from 8.0% to 16.2%. Spodumene was the only lithium-bearing mineral identified in the pegmatite. Biotite and chamosite were the only iron-bearing minerals identified.

For the host rock, three lithium-bearing minerals were identified: spodumene, holmquistite and petalite. Four iron-bearing silicate minerals were identified: biotite, magnesiohornblende, holmquistite, and chamosite.

Table 10-2 - Semi-quantitative mineralogy of the variability pegmatite samples

Mineral	Pegmatite Sample									
	EE_HG	E_LG	S_F	EE_LG	E_S	E_EF2	E_LF	E_EF1	S_S	
	(wt %)									
Plagioclase	30.9	37.3	32.7	33.0	33.4	35.9	33.7	34.4	33.3	
Quartz	32.4	29.7	31.6	33.1	30.0	31.7	32.6	32.1	31.0	
Muscovite	11.1	8.9	10.8	11.8	10.3	10.9	10.3	11.0	12.4	
Biotite	2.4	2.1	2.0	2.7	2.8	2.1	2.3	2.1	2.5	
Spodumene	16.2	8.9	14.4	8.0	15.0	12.0	13.8	13.4	13.2	
Potassium-feldspar	6.4	11.2	7.8	9.0	7.6	6.2	5.9	6.3	6.1	
Chamosite	-	0.8	-	-	-	0.3	0.8	-	-	
Apatite	0.7	1.0	0.7	0.7	0.8	0.9	0.7	0.7	0.8	
Kaolinite	-	-	-	1.7	-	-	-	-	-	
Beryl	-	-	-	-	-	-	-	-	0.6	
TOTAL	100	100	100	100	100	100	100	100	100	

Table 10-3: Semi-quantitative mineralogy of the variability host rock samples

Mineral	Host Rock Sample									
	EE_HG	E_LG	S_F	EE_LG	E_S	E_EF2	E_LF	E_EF1	S_S	
	(wt %)									
Plagioclase	25.8	34.1	26.2	19.8	35.3	28.8	28.4	33.9	35.8	
Quartz	12.0	9.4	11.0	11.2	4.7	9.9	11.4	7.0	4.3	
Muscovite	16.5	5.9	10.4	12.2	3.2	11.9	11.7	7.2	6.8	
Biotite	11.8	7.7	1.0	4.2	4.2	3.1	4.6	5.6	3.6	
Spodumene	0.8	0.5	0.4	0.8	0.3	0.3	0.3	0.1	0.7	
Potassium-feldspar	3.1	4.7	2.8	3.5	4.5	2.8	1.2	1.0	2.8	
Amphibole	7.4	17.5	17.1	13.9	23.1	18.3	12.3	19.2	20.0	
Holmquistite	5.4	7.3	6.9	10.7	6.2	10.7	7.6	8.3	7.0	
Chamosite	7.2	3.3	7.8	6.9	5.1	4.2	9.3	4.7	5.1	
Pyroxene	4.6	4.9	5.8	6.8	4.1	3.0	5.2	6.6	4.4	
Apatite	0.5	0.8	1.4	1.7	1.2	0.7	0.9	1.2	0.8	
Maghemite	2.3	1.0	-	-	-	-	-	-	-	
Rutile	0.5	0.9	1.2	0.6	1.4	0.7	0.9	0.7	1.1	
Magnetite	-	-	0.4	0.5	0.7	1.0	0.6	0.9	0.6	
Hematite	-	-	0.6	0.8	0.7	0.5	0.6	0.4	0.6	
Ilmenite	-	-	1.1	0.5	0.9	1.0	0.5	0.9	0.8	
Siderite	-	-	2.5	1.5	1.5	1.1	1.4	0.8	2.1	
Calcite	-	-	1.4	3.0	1.8	1.1	1.7	1.0	0.8	
TOTAL	100	100	100	100	100	100	100	100	100	

Table 10-4 shows semi-quantitative mineralogy of the variability samples (i.e., combined pegmatite and host rock samples). The amount of host rock dilution present in each sample is shown in Table 10-5 and ranged from 9.4% to 17.3%. Also shown are estimates of the amount of lithium present as spodumene in each variability sample.

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Spodumene is the only lithium-bearing mineral that will be selectively recovered in the Piedmont Lithium concentrator flowsheet. Lithium present in spodumene ranged from 74.5% in variability sample E_LF to 95.2% in sample EE_HG.

Table 10-4: Semi-quantitative mineralogy of the variability (composite) samples

Mineral	Variability Sample									
	EE_HG	E_LG	S_F	EE_LG	E_S	E_EF2	E_LF	E_EF1	S_S	
	(wt %)									
Albite	27.9	41.5	33.6	33.6	40.6	35.9	36.8	39.6	36.6	
Quartz	30.7	23.6	24.7	30.9	26.7	26.5	23.8	22.6	23.3	
Microcline	7.2	10.8	10.4	10.9	8.8	9.0	11.5	8.6	9.4	
Spodumene	12.2	8.7	12.2	7.6	11.7	8.9	9.5	8.7	11.8	
Muscovite	10.3	4.4	6.1	6.3	5.1	5.9	4	6.3	6.2	
Biotite	5.4	4.5	2.7	3.5	1.7	3.9	4.6	5.3	4.4	
Holmquistite	1.0	1.9	1.6	1.3	0.5	2.8	3.9	2.8	2.7	
Magnesiohornblende	1.6	1.6	2.9	1.9	1.4	2.2	0.7	1.2	1.9	
Diopside	1.4	1.4	1.5	1.8	1.2	1.9	1.2	2.0	1.9	
Petalite	0.2	0.9	2.3	0.8	0.7	1.8	2.2	1.4	0.3	
Chamosite	1.1	0.3	1.5	0.8	1.1	0.6	0.7	0.9	1.0	
Calcite	1.0	0.5	0.6	0.5	0.4	0.5	1.1	0.6	0.6	
TOTAL	100	100	100	100	100	100	100	100	100	

Table 10-5: Dilution and estimated lithium content in spodumene for each variability samples

Item	Variability Sample								
	EE_HG	E_LG	S_F	EE_LG	E_S	E_EF2	E_LF	E_EF1	S_S
	(%)								
Dilution	16.4	15.5	15.0	12.1	9.4	14.3	16.1	17.3	17.3
Li in Spodumene (est.)	95.2	85.5	84.9	87.1	94.6	78.3	74.5	73.6	80.8

Table 10-6 shows the head assays for the nine variability samples. Lithia (Li₂O) concentration ranged from 0.69% to 1.12%. Iron assay ranged from 1.40% to 2.25% Fe₂O₃.

Table 10-6: Variability sample assays

Variability Sample	Assay, %										
	Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	MnO
E_EF1	0.49	1.05	69.9	16.6	2.01	0.68	1.26	3.70	2.49	0.33	0.13
E_EF2	0.46	0.99	70.0	16.4	1.80	0.63	1.53	3.97	2.34	0.33	0.12
EE_HG	0.52	1.12	70.2	16.5	1.92	0.72	0.95	3.46	2.51	0.30	0.11
E_LG	0.32	0.69	70.7	16.0	1.89	0.59	1.32	4.19	2.90	0.39	0.13
EE_LG	0.32	0.69	69.8	16.0	1.85	0.70	1.15	3.93	2.88	0.38	0.15
E_S	0.49	1.05	71.2	16.4	1.40	0.46	1.13	3.71	2.53	0.36	0.13
E_LF	0.47	1.01	70.3	16.3	1.81	0.61	1.29	3.93	2.46	0.32	0.13
S_F	0.47	1.01	70.1	16.1	2.00	0.75	1.48	3.75	2.44	0.34	0.12
S_S	0.51	1.10	69.8	16.4	2.25	0.76	1.54	3.58	2.41	0.40	0.14

10.3 GRINDABILITY

Table 10-7 presents results of the grindability tests. Bond rod mill work index (RWi) ranged from 9.7 kWh/t to 11.5 kWh/t. Bond ball mill work index ranged from 10.9 kWh/t to 12.8 kWh/t. Abrasion index ranged from 0.395 g to 0.486 g.

Table 10-7 -Variability grindability results

Variability Sample	RWi kWh/t	BWi kWh/t	Ai g
E_EF1	9.9	11.1	0.395
E_EF2	11.0	12.3	0.486
E_S	9.7	10.9	0.422
E_LF	10.7	12.0	0.409
E_LG	9.8	11.0	0.425
EE_HG	11.5	11.8	0.474
EE_LG	10.0	11.5	0.448
S_F	10.9	12.8	0.439
S_S	9.8	12.1	0.411

(Note: measurements are metric)

10.4 HEAVY LIQUID SEPARATION (HLS)

The HLS tests were undertaken on sub-samples of each variability sample. The ultrafine fraction (i.e., -1.0 mm) was screened out from each sub-sample and the oversize fraction the (-6.3 mm / +1 mm) was submitted for HLS testing with a heavy liquid comprised of methylene iodide diluted with acetone. Each HLS test included specific gravity (SG) cut points of 3.00, 2.95, 2.90, 2.85, 2.80, 2.70, 2.65, and 2.60. Products were screened at 3.3 mm and analyzed to produce coarse (-6.3 mm / +3.3 mm) and fine (-3.3 mm / + 1 mm) stage mass balances.

Figure 10-2 and Figure 10-3 present the HLS stage grade-recovery curves for the coarse and fines fractions, respectively. The coarse concentrates did not achieve 6% Li₂O. The fines fraction generally showed higher concentrate grades and recoveries, likely due to increased spodumene liberation. For the fines fraction, two of the nine samples achieved 6% Li₂O concentrate at a heavy liquid sg of 3.0. Low concentrate grades were due to significant quantities of host rock reporting to the sinks which resulted in high iron concentrations in the sinks streams.

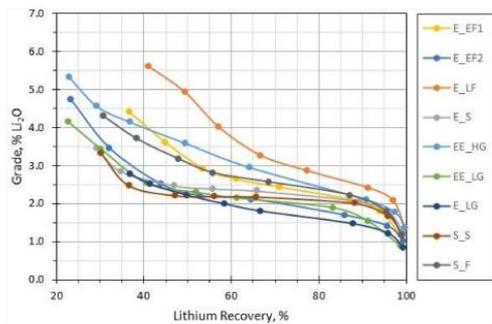


Figure 10-2 - Coarse fraction cumulative sinks grade – stage recovery curves

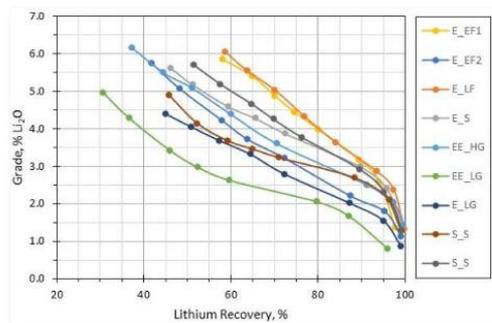


Figure 10-3 - Fines fraction cumulative sinks grade – stage recovery curves

Figure 10-4 and Figure 10-5 present the HLS stage grade-recovery curves for the coarse and fines fractions after dry magnetic separation, respectively. For both fractions, all the concentrates achieved 6% Li₂O. Again, the fines fraction generally showed higher concentrate grades and recoveries.

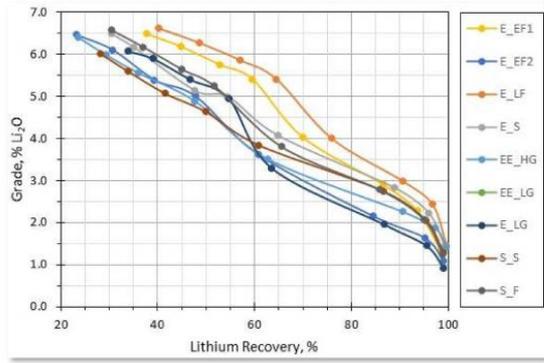


Figure 10-4 - Coarse fraction cumulative sinks - recovery curves with magnetic separation

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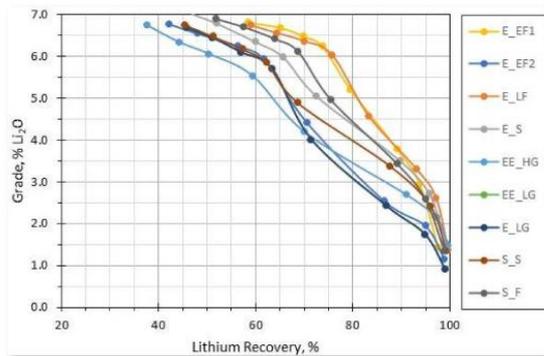


Figure 10-5 - Fines fraction HLS cumulative sinks grade - recovery curves with magnetic separation

Table 10-8 and Table 10-9 show the HLS stage and global, respectively, grades and recoveries interpolated to 6% Li_2O spodumene concentrate (post dry magnetic separation). Iron in the concentrate ranged from 0.75% to 1.35% Fe_2O_3 . Stage lithium recoveries ranges from 40% to 68%. Global (including the fines fraction) lithium recoveries ranged from 21% to 48%. The heavy liquid sg values presented in the tables were used as target values for DMS testwork.

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Table 10-8 - Combined Stage HLS results with magnetic separation – Grades and recoveries

Sample	HL SG g/cm ³	Weight %	Assays (%)										Distribution (%)								
			Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	Na ₂ O	K ₂ O	P ₂ O ₅
E_EF1	2.86	13.6	2.80	6.0	65.2	24.7	0.82	0.34	0.15	0.68	0.45	0.15	67.9	12.1	21.2	11.5	6.9	9.2	2.5	2.3	7.1
E_EF2	2.91	7.9	2.80	6.0	64.6	25.0	0.89	0.46	0.17	0.63	0.56	0.17	47.8	7.0	12.5	7.7	4.3	6.0	1.2	1.8	4.3
E_LF	2.88	13.9	2.79	6.0	65.6	24.7	0.75	0.26	0.07	0.63	0.51	0.15	67.4	12.5	21.4	10.1	12.2	1.4	2.2	2.9	8.0
E_LG	2.93	6.2	2.79	6.0	64.4	24.6	1.07	0.75	0.11	0.56	0.63	0.44	49.3	5.5	9.6	5.3	5.0	2.2	18.5	23.6	0.9
E_S	2.91	11.6	2.79	6.0	65.4	24.3	1.19	0.50	0.20	0.66	0.49	0.18	54.7	10.5	17.7	16.5	24.7	4.0	2.1	2.0	6.4
EE_HG	2.92	9.0	2.79	6.0	66.5	24.1	0.83	0.23	0.08	0.48	0.39	0.17	41.2	8.4	13.4	5.4	4.7	1.2	1.2	1.4	5.5
EE_LG	2.91	4.6	2.80	6.0	65.0	24.7	1.01	0.42	0.11	0.50	0.52	0.26	39.7	4.2	7.5	4.5	6.4	0.7	0.6	0.8	3.6
E_LG	2.93	6.2	2.79	6.0	64.4	24.6	1.07	0.75	0.11	0.56	0.63	0.44	49.3	5.5	9.6	5.3	5.0	2.2	18.5	23.6	0.9
S_F	2.88	10.8	2.79	6.0	64.8	24.7	1.00	0.47	0.18	0.73	0.51	0.18	59.0	9.7	16.8	10.7	14.1	2.4	2.0	2.0	7.0
S_S	2.93	9.2	2.79	6.0	64.2	24.8	1.35	0.63	0.29	0.55	0.41	0.19	47.1	8.1	14.4	11.9	7.1	10.3	1.4	1.4	4.9

Table 10-9 - Combined Global HLS results with magnetic separation – Grades and recoveries

Sample	HL SG g/cm ³	Weight %	Assays (%)										Distribution (%)								
			Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	Na ₂ O	K ₂ O	P ₂ O ₅
E_EF1	2.86	7.6	2.80	6.0	65.2	24.7	0.82	0.34	0.15	0.68	0.45	0.15	42.7	7.1	11.4	2.9	2.0	1.7	1.4	1.4	3.5
E_EF2	2.91	4.9	2.80	6.0	64.6	25.0	0.89	0.46	0.17	0.63	0.56	0.17	32.0	4.5	7.5	2.3	1.5	1.3	0.8	1.2	2.5
E_LF	2.88	9.0	2.79	6.0	65.6	24.7	0.75	0.26	0.07	0.63	0.51	0.15	47.9	8.4	13.7	3.4	2.8	0.6	1.5	1.9	4.2
E_LG	2.93	3.6	2.79	6.0	64.4	24.6	1.07	0.75	0.11	0.56	0.63	0.44	31.4	3.3	5.5	1.9	2.0	0.6	7.4	9.4	0.6
E_S	2.91	6.5	2.79	6.0	65.4	24.3	1.19	0.50	0.20	0.66	0.49	0.18	34.5	6.0	9.7	5.4	4.6	1.5	1.2	1.3	3.2
EE_HG	2.92	6.0	2.79	6.0	66.5	24.1	0.83	0.23	0.08	0.48	0.39	0.17	29.5	5.6	8.8	2.7	2.1	0.6	0.8	0.9	3.2
EE_LG	2.91	2.3	2.80	6.0	65.0	24.7	1.01	0.42	0.11	0.50	0.52	0.26	21.5	2.2	3.5	1.3	1.4	0.3	0.3	0.4	1.8
E_LG	2.93	3.6	2.79	6.0	64.4	24.6	1.07	0.75	0.11	0.56	0.63	0.44	31.4	3.3	5.5	1.9	2.0	0.6	7.4	9.4	0.6
S_F	2.88	6.2	2.79	6.0	64.8	24.7	1.00	0.47	0.18	0.73	0.51	0.18	35.9	5.8	9.5	3.1	3.3	0.9	1.2	1.3	3.2
S_S	2.93	5.0	2.79	6.0	64.2	24.8	1.35	0.63	0.29	0.55	0.41	0.19	28.9	4.6	7.6	2.7	1.8	1.7	0.8	0.9	2.3

10.5 REFLUX CLASSIFIER

Ten tests were undertaken using a pilot-scale Reflux Classifier (RC100) operating in semi-batch mode. Tests were undertaken on the fines fraction (-3.3 mm / +1.0 mm) of each of the nine variability samples. The size of the samples tested ranged from 41 kg to 78 kg. Each of the tests generated a concentrate, tailings, and slimes sample, and in some testwork, middlings samples were also produced. Fluidization water flowrate ranged from 55 L/min to 80 L/min.

Table 10-10 presents the Reflux Classifier testwork results. Mass pull to the overflow ranged from 0.9% to 7.1%. Based on potassium assays, there seemed to be minimal concentration to the overflow stream.

Table 10-10 - Reflux Classifier testwork results

Sample	Product	Weight %	Assays, %					% Distribution				
			Li	SiO ₂	Al ₂ O ₃	Na ₂ O	K ₂ O	Li	SiO ₂	Al ₂ O ₃	Na ₂ O	K ₂ O
S_S (T1)	Overflow	0.9	0.36	63.5	18.5	4.12	2.63	0.6	0.8	1.0	1.0	1.0
	Middlings	10.1	0.51	71.8	15.9	3.63	2.51	9.4	10.2	9.9	10.1	11.0
	Underflow	89.0	0.55	71.1	16.1	3.60	2.27	90.0	89.0	89.0	88.8	88.0
	Feed (calc.)	100.0	0.54	71.1	16.1	3.61	2.30	100.0	100.0	100.0	100.0	100.0
S_S (T2)	Overflow	2.3	0.33	69.3	17.0	4.28	2.67	1.4	2.3	2.5	2.9	2.5
	Underflow	97.7	0.55	70.8	15.8	3.41	2.46	98.6	97.7	97.5	97.1	97.5
	Feed (calc.)	100.0	0.54	70.8	15.8	3.43	2.46	100.0	100.0	100.0	100.0	100.0
EE_LG	Overflow	1.1	0.17	68.3	18.3	3.52	3.85	0.5	1.0	1.2	1.0	1.4
	Underflow	98.8	0.36	71.6	15.6	3.74	2.95	99.4	98.9	98.6	98.9	98.5
	Slimes	0.1	0.23	59.1	21.9	3.06	2.18	0.1	0.1	0.2	0.1	0.1
	Feed (calc.)	100.0	0.36	71.5	15.6	3.74	2.96	100.0	100.0	100.0	100.0	100.0
E_EF2	Overflow	6.2	0.30	72.3	15.4	4.28	2.76	4.0	6.4	5.9	6.5	7.0
	Underflow	93.7	0.48	70.9	16.2	4.08	2.45	95.9	93.6	94.0	93.4	92.9
	Slimes	0.1	0.33	60.7	18.1	3.82	2.32	0.1	0.1	0.1	0.1	0.1
	Feed (calc.)	100.0	0.47	71.0	16.2	4.09	2.47	100.0	100.0	100.0	100.0	100.0
E_S	Overflow	7.1	0.37	73.2	15.7	3.76	3.31	4.3	7.2	6.8	7.5	8.6
	Underflow	92.9	0.63	71.6	16.5	3.53	2.66	95.7	92.7	93.2	92.4	91.3
	Slimes	0.1	0.30	63.7	17.9	4.38	2.49	0.0	0.1	0.1	0.1	0.1
	Feed (calc.)	100.0	0.61	71.7	16.4	3.55	2.71	100.0	100.0	100.0	100.0	100.0
S_F	Overflow	6.1	0.31	73.2	15.1	4.07	3.14	3.7	6.2	5.8	6.5	7.2
	Underflow	93.8	0.53	72.0	15.8	3.80	2.62	96.3	93.8	94.1	93.4	92.7
	Slimes	0.1	0.29	55.1	16.5	3.18	2.08	0.0	0.1	0.1	0.1	0.1
	Feed (calc.)	100.0	0.52	72.1	15.8	3.82	2.65	100.0	100.0	100.0	100.0	100.0
E_LF	Overflow	1.7	0.17	72.7	15.5	4.32	3.58	0.5	1.7	1.6	1.9	2.5
	Underflow	98.2	0.55	71.4	16.2	3.86	2.39	99.4	98.2	98.3	98.1	97.4
	Slimes	0.1	0.29	53.8	14.5	3.30	2.05	0.0	0.1	0.1	0.1	0.1
	Feed (calc.)	100.0	0.54	71.4	16.2	3.87	2.41	100.0	100.0	100.0	100.0	100.0
EE_HG	Overflow	0.3	0.20	71.4	16.1	3.94	4.08	0.1	0.3	0.3	0.3	0.4
	Middlings	1.8	0.32	72.2	15.8	3.87	3.36	0.9	1.8	1.7	1.9	2.3
	Underflow	97.9	0.61	71.6	16.4	3.57	2.52	98.9	97.9	97.9	97.7	97.1
	Slimes	0.1	0.31	55.5	15.4	3.19	2.49	0.0	0.1	0.1	0.1	0.1
	Feed (calc.)	100.0	0.60	71.6	16.4	3.58	2.54	100.0	100.0	100.0	100.0	100.0

Sample	Product	Weight %	Assays, %					% Distribution				
			Li	SiO ₂	Al ₂ O ₃	Na ₂ O	K ₂ O	Li	SiO ₂	Al ₂ O ₃	Na ₂ O	K ₂ O
E_EF1	Overflow	0.6	0.26	70.6	16.5	4.07	3.44	0.3	0.5	0.6	0.6	0.8
	Middlings	1.9	0.24	70.2	16.7	4.20	3.12	0.8	1.8	2.0	2.1	2.4
	Underflow	97.3	0.55	72.1	15.9	3.69	2.46	98.7	97.4	97.1	97.0	96.7
	Slimes	0.3	0.30	53.1	18.5	2.61	1.60	0.2	0.2	0.4	0.2	0.2
	Feed (calc.)	100.0	0.54	72.0	15.9	3.70	2.47	100.0	100.0	100.0	100.0	100.0
E_LG	Overflow	0.5	0.14	69.8	17.1	3.97	4.52	0.2	0.5	0.6	0.5	0.8
	Middlings	2.9	0.19	70.3	16.9	4.24	3.91	1.6	2.9	3.1	3.0	3.8
	Underflow	96.4	0.35	71.7	15.6	4.14	3.00	98.1	96.5	96.1	96.4	95.3
	Slimes	0.1	0.19	62.7	15.8	4.63	2.50	0.1	0.1	0.1	0.1	0.1
	Feed (calc.)	100.0	0.34	71.6	15.6	4.14	3.03	100.0	100.0	100.0	100.0	100.0

Table 10-11 shows mineralogy of the overflow and underflow products for sample EE_LG. Muscovite content in the overflow was 16.6% as compared to 5.5% in the underflow.

Table 10-11: Example mineralogy from Reflux Classifier testing (EE_LG)

Mineral	Overflow	Underflow
	(wt %)	
Albite	32.6	35.2
Quartz	24.8	28.6
Muscovite	16.6	5.5

Muscovite	16.6	13.5
Microcline	12.1	13.6
Spodumene	2.9	8.9
Diopside	2.9	2.6
Kaolinite	3.0	-
Biotite	1.2	1.0
Halloysite	2.0	-
Petalite	1.5	0.4
Holmquistite	-	1.6
Chamosite	-	1.5
Calcite	0.0	0.7
Magnetite	0.4	0.3
Total	100.0	100.0

10.6 DENSE MEDIA SEPARATION (DMS)

The DMS testwork was performed on each of the variability samples on the coarse (-6.3 mm / +3.3 mm), and fines (-3.3 mm / +1.0 mm) size fractions separately. Each size fraction underwent two DMS passes for: 1) gangue rejection and, 2) concentrate production. The first pass was operated at a lower media density to reject silicate gangue minerals (sg of 2.65). The first pass sink product was reprocessed through the DMS at a higher density cut-point to produce spodumene concentrate. The cut-points for the second pass were based on interpolated HLS data for the production of 6% Li₂O spodumene concentrate. Dry magnetic separation was performed on the concentrate to reject iron-bearing minerals.

Table 10-12, Table 10-13, and Table 10-14 present the combined global DMS mass balance results for the nine variability samples. DMS concentrate grades, after magnetic separation ranged from 5.96% to 6.63% Li₂O. Iron in the final concentrates ranged from 0.79% to 1.37% Fe₂O₃. Mass recoveries (global) to the concentrate ranged from 2.8% to 7.5%. Combined global lithium recovery ranged from 23.0% to 42.4



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Table 10-12 - Combined global DMS mass and elemental balances (E_EF1, E_EF2, E_S, E_LF)

Sample	Product	Wt. %	Assays (%)									Distribution (%)							
			Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅
E_EF1	Conc. Non-Mag	6.1	2.94	6.32	65.9	25.0	0.84	0.19	0.65	0.41	0.11	37.3	5.7	9.2	2.4	0.9	1.0	1.0	2.3
	Conc. Mag	3.1	0.36	0.77	48.7	18.0	11.78	7.81	1.66	1.46	0.65	2.3	2.1	3.4	17.5	20.0	1.3	1.9	6.7
	Middling	25.0	0.46	0.98	71.8	15.4	2.45	1.77	3.65	1.62	0.33	23.8	25.6	23.4	29.3	36.6	23.7	16.7	27.1
	Tailings	29.2	0.07	0.15	74.5	14.6	0.43	0.30	4.76	3.90	0.26	4.3	30.9	25.8	6.0	7.1	36.1	46.8	25.1
	Ultrafines wet	1.1	0.51	1.10	66.8	17.8	4.28	1.16	3.63	2.47	0.35	1.1	1.0	1.1	2.2	1.0	1.0	1.1	1.2
	Ultrafines dry	35.5	0.42	0.90	68.6	17.2	2.51	1.17	3.99	2.22	0.32	31.1	34.7	37.1	42.6	34.3	36.8	32.5	37.6
	Head (Calc.)	100	0.48	1.03	70.3	16.5	2.09	1.21	3.85	2.43	0.30	100	100	100	100	100	100	100	100
	Head (Dir.)		0.49	1.05	69.9	16.6	2.01	1.26	3.70	2.49	0.33								
	Flotation Feed	61.6	0.44	0.94	69.9	16.5	2.52	1.41	3.85	1.98	0.32	56.1	61.2	61.6	74.1	71.9	61.5	50.3	65.9
	E_EF2	Conc. Non-Mag	4.1	3.00	6.45	65.2	25.1	0.79	0.30	0.60	0.54	0.17	27.2	3.8	6.3	1.7	0.8	0.6	0.9
Conc. Mag		2.7	0.37	0.79	48.5	17.4	12.51	7.89	1.96	1.13	0.67	2.2	1.9	2.9	18.5	14.8	1.3	1.3	5.5
Middling		30.6	0.51	1.09	69.3	16.2	2.46	2.03	3.65	1.69	0.35	34.7	30.2	30.6	40.7	42.6	27.0	22.2	32.2
Tailings		30.5	0.07	0.14	74.1	14.7	0.40	0.50	5.27	3.35	0.29	4.6	32.2	27.7	6.6	10.5	38.9	43.9	26.4
Ultrafines wet		0.8	0.61	1.31	65.3	18.0	4.63	1.40	3.22	2.62	0.36	1.0	0.7	0.8	1.9	0.7	0.6	0.9	0.8
Ultrafines dry		31.4	0.43	0.92	69.6	16.3	1.80	1.41	4.16	2.27	0.35	30.3	31.2	31.6	30.6	30.5	31.7	30.7	33.0
Head (Calc.)		100	0.45	0.96	70.1	16.2	1.85	1.45	4.13	2.32	0.33	100	100	100	100	100	100	100	100
Head (Dir.)			0.46	0.99	70.0	16.4	1.80	1.53	3.97	2.34	0.33								
Flotation Feed		62.8	0.47	1.01	69.4	16.3	2.16	1.71	3.90	1.99	0.35	66.0	62.2	63.1	73.3	73.9	59.3	53.8	66.0
E_S		Conc. Non-Mag	5.3	2.95	6.33	65.7	24.7	1.15	0.24	0.57	0.41	0.13	29.9	4.8	8.0	4.0	1.2	0.8	0.9
	Conc. Mag	3.3	0.41	0.87	47.5	18.8	11.52	9.01	1.69	0.95	0.45	2.5	2.2	3.8	25.0	26.9	1.4	1.2	4.0
	Middling	27.2	0.64	1.38	72.5	15.8	1.57	1.21	3.43	1.73	0.41	33.6	27.6	26.4	28.6	30.2	23.6	19.0	30.0
	Tailings	27.4	0.07	0.16	74.7	14.4	0.41	0.34	4.72	4.10	0.30	3.9	28.7	24.3	7.6	8.5	32.7	45.3	22.5
	Ultrafines wet	0.8	0.65	1.40	66.0	18.2	4.86	1.15	3.15	2.62	0.37	1.0	0.7	0.9	2.5	0.8	0.6	0.8	0.8
	Ultrafines dry	36.1	0.42	0.90	71.3	16.5	1.34	0.98	4.49	2.25	0.42	29.1	36.0	36.6	32.2	32.4	40.9	32.8	40.8
	Head (Calc.)	100	0.52	1.12	71.4	16.2	1.50	1.09	3.96	2.48	0.37	100	100	100	100	100	100	100	100
	Head (Dir.)		0.49	1.05	71.2	16.4	1.40	1.13	3.71	2.53	0.36								
	Flotation Feed	60.1	0.58	1.25	71.2	16.6	1.59	1.12	3.96	1.98	0.41	67.4	59.9	61.3	63.7	61.9	60.2	48.0	66.1
	E_LF	Conc. Non-Mag	7.5	3.05	6.56	65.6	24.8	0.84	0.18	0.59	0.47	0.12	42.4	6.9	11.4	3.3	1.1	1.1	1.4
Conc. Mag		2.3	0.57	1.24	48.2	18.3	11.70	7.11	1.51	1.56	0.99	2.5	1.6	2.6	14.1	13.7	0.9	1.5	7.1
Middling		30.9	0.46	1.00	70.1	15.7	2.69	1.74	3.64	1.72	0.37	26.7	30.7	29.8	43.1	44.5	28.8	21.9	35.1
Tailings		30.4	0.05	0.11	75.0	14.4	0.36	0.36	5.19	3.76	0.26	2.8	32.2	26.9	5.6	9.0	40.3	46.9	24.5
Ultrafines wet		0.8	0.62	1.33	65.9	18.3	4.10	1.32	3.07	2.78	0.34	0.9	0.8	0.9	1.7	0.9	0.6	0.9	0.9
Ultrafines dry		28.1	0.47	1.01	69.7	16.4	2.21	1.33	3.94	2.38	0.34	24.6	27.7	28.3	32.2	30.9	28.3	27.4	29.6
Head (Calc.)		100	0.54	1.15	70.6	16.3	1.93	1.21	3.91	2.44	0.32	100	100	100	100	100	100	100	100
Head (Dir.)			0.47	1.01	70.3	16.3	1.81	1.29	3.93	2.46	0.32								
Flotation Feed		59.9	0.47	1.01	69.9	16.1	2.48	1.54	3.77	2.05	0.35	52.3	59.2	59.1	77.0	76.3	57.7	50.2	65.6



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Table 10-13: Combined global combined DMS mass and elemental balances (E_LG, EE_HG, EE_LG, S_F)

Sample	Product	Wt. %	Assays (%)									Distribution (%)							
			Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅
	Conc. Non-Mag	2.9	2.98	6.42	65.1	24.7	1.11	0.55	0.57	0.58	0.37	27.0	2.7	4.6	1.7	1.3	0.4	0.6	2.7
	Conc. Mag	2.2	0.47	1.01	48.2	16.9	13.18	7.77	1.60	1.30	0.85	3.2	1.5	2.4	15.1	13.6	0.9	1.0	4.7

E_LG	Conc. mag	34.4	0.77	4.04	70.6	15.7	2.63	1.84	3.65	2.02	0.44	37.2	30.2	30.0	41.2	44.2	26.2	21.4	33.7
	Middling	30.4	0.40	0.85	70.2	15.7	2.63	1.84	3.65	2.02	0.44	37.2	30.2	30.0	41.2	44.2	26.2	21.4	33.7
	Tailings	32.9	0.05	0.10	73.6	15.0	0.46	0.37	5.14	4.14	0.30	4.7	34.3	31.0	7.8	9.7	39.8	47.2	24.3
	Ultrafines wet	0.9	0.53	1.14	66.2	18.2	3.99	1.30	3.35	3.00	0.39	1.4	0.8	1.0	1.8	0.9	0.7	0.9	0.8
	Ultrafines dry	30.6	0.28	0.60	70.5	16.1	2.06	1.26	4.45	2.73	0.44	26.4	30.5	31.0	32.4	30.4	32.0	29.0	33.7
	Head (Calc.)	100	0.32	0.70	70.7	15.9	1.95	1.27	4.25	2.89	0.40	100	100	100	100	100	100	100	100
Head (Dir.)		0.32	0.69	70.7	16.0	1.89	1.32	4.19	2.90	0.39									
Flotation Feed	61.9	0.34	0.73	70.3	15.9	2.37	1.55	4.04	2.39	0.44	65.0	61.5	62.0	75.4	75.4	58.9	51.2	68.2	
EE_HG	Conc. Non-Mag	5.0	2.85	6.12	66.9	23.9	0.91	0.22	0.54	0.43	0.16	24.2	4.7	7.3	2.5	1.4	0.7	0.9	2.6
	Conc. Mag	1.3	0.57	1.24	49.0	17.5	11.13	6.43	1.03	1.51	0.59	1.3	0.9	1.4	8.2	10.4	0.4	0.8	2.5
	Middling	35.8	0.67	1.45	71.2	16.1	2.30	1.00	3.12	1.88	0.28	41.1	35.8	35.3	45.7	43.6	31.3	27.5	31.8
	Tailings	23.8	0.09	0.18	74.4	14.7	0.48	0.33	5.10	3.60	0.31	3.5	24.9	21.4	6.3	9.6	34.0	34.9	23.3
	Ultrafines wet	1.0	0.64	1.38	68.5	17.4	2.87	1.05	3.08	2.42	0.32	1.1	1.0	1.1	1.7	1.3	0.9	1.0	1.1
	Ultrafines dry	33.0	0.51	1.10	70.6	16.6	1.94	0.84	3.54	2.59	0.37	28.7	32.8	33.5	35.6	33.7	32.7	34.9	38.8
Head (Calc.)	100	0.59	1.26	71.2	16.3	1.80	0.82	3.57	2.45	0.32	100	100	100	100	100	100	100	100	
Head (Dir.)		0.52	1.12	70.2	16.5	1.92	0.95	3.46	2.51	0.30									
Flotation Feed	69.9	0.60	1.28	70.9	16.4	2.14	0.93	3.32	2.23	0.32	71.0	69.5	69.9	83.0	78.6	64.9	63.4	71.6	
EE_LG	Conc. Non-Mag	2.8	2.78	5.98	65.2	24.2	1.37	0.57	0.60	0.57	0.37	23.0	2.6	4.3	2.3	1.6	0.4	0.6	2.9
	Conc. Mag	1.9	0.42	0.90	48.3	15.4	12.35	7.69	1.62	1.42	0.50	2.3	1.3	1.8	14.0	14.6	0.8	1.0	2.6
	Middling	29.4	0.43	0.92	71.2	15.4	2.18	1.36	3.57	2.13	0.39	36.7	29.5	28.3	38.1	40.1	27.2	22.1	32.1
	Tailings	32.2	0.07	0.16	74.1	14.8	0.50	0.34	4.60	3.87	0.32	6.8	33.7	29.8	9.6	11.0	38.5	44.2	28.7
	Ultrafines wet	1.0	0.59	1.27	66.5	18.3	3.47	1.24	3.22	2.73	0.33	1.8	1.0	1.2	2.1	1.3	0.9	1.0	0.9
	Ultrafines dry	32.6	0.31	0.67	69.4	17.0	1.74	0.96	3.80	2.69	0.36	29.5	31.9	34.6	33.8	31.4	32.2	31.1	32.7
Head (Calc.)	100	0.34	0.74	70.9	16.0	1.68	1.00	3.85	2.82	0.36	100	100	100	100	100	100	100	100	
Head (Dir.)		0.32	0.69	69.8	16.0	1.85	1.15	3.93	2.88	0.38									
Flotation Feed	63.0	0.37	0.80	70.2	16.3	1.97	1.15	3.68	2.43	0.37	67.9	62.4	64.1	74.1	72.8	60.3	54.3	65.7	
S_F	Conc. Non-Mag	6.0	2.77	5.96	65.4	24.5	0.97	0.37	0.84	0.54	0.18	34.9	5.5	9.2	3.3	1.8	1.3	1.3	3.2
	Conc. Mag	3.6	0.37	0.80	47.9	16.7	12.69	7.72	1.98	1.17	1.12	2.8	2.4	3.8	25.7	22.4	1.8	1.6	12.0
	Middling	28.9	0.50	1.08	72.0	15.4	2.09	1.51	3.63	1.59	0.33	30.7	29.4	27.8	33.9	35.3	26.9	17.9	27.8
	Tailings	33.4	0.06	0.12	74.1	14.6	0.34	0.38	4.92	4.04	0.28	3.9	34.9	30.4	6.3	10.3	42.1	52.4	27.2
	Ultrafines wet	0.7	0.50	1.08	66.9	17.5	4.13	1.24	3.46	2.64	0.36	0.8	0.7	0.8	1.7	0.7	0.6	0.7	0.8
	Ultrafines dry	27.4	0.47	1.01	70.0	16.4	1.90	1.34	3.88	2.45	0.36	27.0	27.0	28.0	29.2	29.5	27.2	26.1	29.1
Head (Calc.)	100	0.48	1.02	70.8	16.0	1.78	1.24	3.90	2.57	0.34	100	100	100	100	100	100	100	100	
Head (Dir.)		0.47	1.01	70.1	16.1	2.00	1.48	3.75	2.44	0.34									
Flotation Feed	57.0	0.49	1.05	71.0	15.9	2.02	1.43	3.75	2.02	0.34	58.4	57.1	56.7	64.8	65.5	54.8	44.7	57.7	

Table 10-14: Global combined DMS Mass and elemental balances (Variability samples S_S)

Sample	Product	Wt. %	Assays (%)									Distribution (%)							
			Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅
S_S	Conc. Non-Mag	4.1	3.10	6.67	64.6	25.3	1.05	0.24	0.46	0.33	0.13	25.3	3.8	6.5	1.9	0.7	0.5	0.6	1.3
	Conc. Mag	3.6	0.44	0.96	48.2	16.5	13.00	8.02	1.79	0.84	0.90	3.1	2.5	3.7	20.0	19.0	1.7	1.3	8.0
	Middling	30.5	0.58	1.25	70.5	15.7	2.70	1.85	3.28	1.59	0.42	34.9	30.9	29.7	35.5	37.4	26.4	21.1	31.8
	Tailings	26.7	0.08	0.17	73.9	14.4	0.47	0.43	4.74	3.70	0.32	4.2	28.3	23.8	5.4	7.6	33.4	42.9	20.9
	Ultrafines wet	1.1	0.51	1.10	66.6	17.7	4.58	1.14	3.46	2.65	0.35	1.1	1.0	1.2	2.1	0.8	1.0	1.2	0.9
	Ultrafines dry	34.0	0.47	1.01	68.8	16.7	2.40	1.54	4.13	2.23	0.44	31.4	33.6	35.2	35.1	34.6	37.1	33.0	37.0
	Head (Calc.)	100	0.51	1.09	69.7	16.2	2.33	1.51	3.79	2.30	0.40	100	100	100	100	100	100	100	100
	Head (Dir.)		0.51	1.10	69.8	16.4	2.25	1.54	3.58	2.41	0.40								
	Flotation Feed	64.1	0.58	1.25	68.9	16.5	2.73	1.74	3.65	1.89	0.43	73.2	63.3	65.6	75.2	73.7	61.7	52.7	68.4

10.7 MICA REMOVAL AND SPODUMENE FLOTATION

10.7.1 Batch Tests

Batch flotation tests were undertaken on samples from each variability sample (see Table 10-15). The feed to the flotation tests comprised the DMS middlings and tailings streams. Samples were stage-ground to -300 micron and underwent: magnetic separation, mica flotation, scrubbing and de-sliming, high-density conditioning and spodumene flotation.

Table 10-16 to Table 10-18 present results of optimized batch flotation tests (for mica removal and spodumene flotation) for each of the nine variability samples. Spodumene flotation concentrate grades ranged from 5.21% to 5.96% Li₂O. Iron in the final concentrates ranged from 0.91% to 1.70% Fe₂O₃. Stage mass recoveries to the final concentrate ranged from 7.0% to 15.9%. Stage lithium recovery ranged from 53.3% to 71.3%. Figure 10-6 shows the batch flotation test lithium grade and stage recovery curves for the optimized conditions.

Calculated iron concentrations in the flotation feed were relatively high and ranged from 1.21% to 2.61% Fe₂O₃. Multiple stages of medium- and high-intensity magnetic separation were employed prior to flotation to reject iron-bearing minerals. Mass pulls to the magnetic concentrates ranged from 6.2% to 12.0% with lithium losses ranging from 7.1% to 20.3%.

Stage mass pull to the mica rougher and scavenger concentrates ranged from 7.9% to 22.3% with grades ranging from 8.1% to 9.0% K₂O + Na₂O.

Table 10-15 - Batch flotation test reagent dosages

Sample	Reagent Dosage, g/t						
	EDA	Armac C/T	NaOH	Na ₂ CO ₃	MIBC	F220	FA2
E_EF1	-	110	400	114	23	250	620
E_EF2	-	110	300	120	23	250	620
E_S	-	110	400	114	23	250	620
E_LF	-	110	300	100	23	250	620
E_LG	-	110	300	120	23	250	620
EE_HG	-	110	375	114	23	250	520

EE_LG	25	60	500	145	28	250	525
S_F	-	110	325	120	23	250	620
S_S	-	110	325	113	23	250	620

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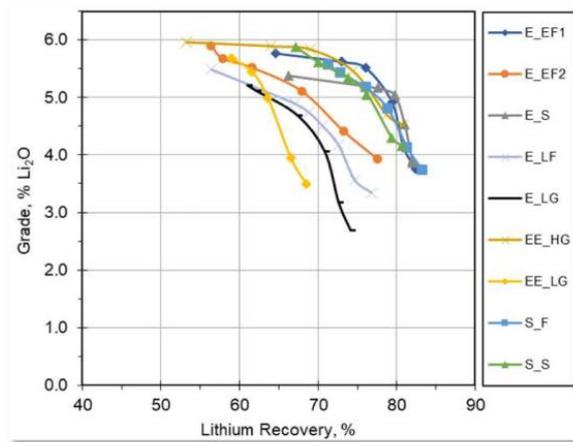


Figure 10-6 - Batch flotation test grade-recovery curves

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Table 10-16 - Batch flotation test results (Variability samples E_EF1, E_EF2, E_S, and E_LF)

Test	Product	Wt.		Assays,%													Distribution,%									
		%	Li	Li ₂ O	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	MgO	MnO	P ₂ O ₅	Fe ₂ O ₃	Li	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	MgO	MnO	P ₂ O ₅	Fe ₂ O ₃			
	2nd Cl Conc. 1	10.4	2.68	5.77	61.9	23.7	0.49	0.79	2.09	0.22	0.14	0.74	0.99	64.6	9.0	15.7	2.8	2.0	15.7	4.6	16.7	28.8	6.3			
	2nd Cl Conc. 1-2	12.0	2.61	5.62	62.2	23.5	0.53	0.86	2.06	0.22	0.14	0.72	1.04	73.0	10.4	18.1	3.5	2.6	17.9	5.4	19.3	32.5	7.6			

E/F1	2nd CI Conc.	12.7	2.56	5.51	62.3	23.4	0.55	0.92	2.04	0.22	0.14	0.70	1.05	76.1	11.1	19.1	3.9	2.9	18.9	5.7	20.4	33.8	8.2
	1st CI Conc.	14.9	2.29	4.92	63.7	22.5	0.68	1.32	1.99	0.22	0.13	0.63	1.04	79.4	13.3	21.4	5.6	4.9	21.5	6.6	22.1	35.5	9.6
	Ro Conc.	18.0	1.92	4.14	65.6	21.2	0.83	1.91	1.87	0.20	0.11	0.55	0.96	80.9	16.6	24.4	8.2	8.6	24.5	7.4	23.6	37.2	10.6
	Sc Conc.	20.3	1.74	3.75	66.3	20.6	0.95	2.19	1.81	0.20	0.11	0.50	0.94	82.4	18.8	26.8	10.6	11.1	26.7	8.1	24.6	38.5	11.7
	Ro Tail	60.5	0.02	0.04	79.0	12.2	1.39	5.24	0.64	0.03	0.01	0.10	0.33	2.8	66.9	47.1	46.3	79.0	28.0	3.1	7.7	23.2	12.2
	Sc Tail	58.2	0.01	0.02	79.3	12.0	1.37	5.27	0.61	0.02	0.01	0.10	0.31	1.2	64.6	44.7	43.8	76.5	25.8	2.4	6.7	21.9	11.1
	Mica Ro Conc.	2.4	0.23	0.50	58.8	24.6	5.52	2.65	1.00	0.41	0.07	0.32	1.68	1.3	2.0	3.8	7.2	1.6	1.7	2.0	1.9	2.9	2.5
	Mica Ro-Sc Conc.	7.9	0.20	0.42	55.3	27.4	6.61	2.17	0.80	0.40	0.07	0.26	1.78	3.6	6.1	13.9	28.7	4.3	4.6	6.5	6.4	7.9	8.7
	Mag Conc.	8.2	0.48	1.03	50.7	17.2	2.57	1.54	3.66	4.51	0.57	0.76	12.31	9.1	5.8	9.0	11.5	3.1	21.7	74.8	54.0	23.5	61.8
	Total Slimes	5.4	0.29	0.62	61.7	16.4	1.78	3.70	5.41	0.75	0.13	0.41	2.02	3.6	4.7	5.7	5.3	5.0	21.2	8.2	8.3	8.2	6.7
Head (calc.)	100	0.43	0.92	71.5	15.6	1.82	4.01	1.38	0.49	0.09	0.27	1.63	100	100	100	100	100	100	100	100	100	100	100
E/F2	3rd CI Conc. Non-Mag	8.4	2.74	5.90	61.0	24.2	0.55	0.74	2.61	0.17	0.18	0.82	1.05	56.4	7.0	13.0	2.6	1.5	13.7	3.1	17.0	24.0	6.6
	3rd CI Conc.	8.9	2.64	5.67	60.3	23.8	0.57	0.75	2.96	0.39	0.20	0.87	1.52	57.9	7.4	13.6	2.8	1.6	16.5	7.5	20.0	27.2	10.2
	2nd CI Conc.	9.8	2.56	5.52	60.7	23.7	0.62	0.87	2.87	0.39	0.19	0.92	1.51	61.5	8.1	14.8	3.4	2.0	17.6	8.1	21.3	28.1	11.1
	1st CI Conc.	11.6	2.37	5.11	63.6	23.2	0.73	1.18	2.75	0.38	0.18	0.73	1.46	67.9	9.9	17.3	4.7	3.3	20.1	9.4	23.8	29.9	12.8
	Li Ro Conc.	14.5	2.05	4.41	63.3	22.1	0.85	1.77	2.60	0.35	0.16	0.63	1.33	73.3	12.7	20.6	6.9	6.1	23.7	10.8	26.5	32.2	14.5
	Li Ro-Sc Conc.	17.2	1.83	3.93	64.3	21.5	0.95	2.17	2.52	0.33	0.15	0.57	1.25	77.6	15.3	23.8	9.1	8.9	27.2	12.4	28.9	34.1	16.2
	Li Ro Tail	63.0	0.05	0.11	80.4	12.2	1.21	5.30	0.72	0.05	0.02	0.10	0.25	8.0	69.7	49.1	42.7	79.2	28.4	6.7	16.1	23.0	11.7
	Li Sc Tail	60.2	0.03	0.05	80.9	11.9	1.20	5.34	0.66	0.04	0.02	0.10	0.22	3.7	67.1	46.0	40.4	76.4	24.9	5.2	13.6	21.1	10.0
	Mica Ro Conc.	6.9	0.25	0.54	55.3	27.4	6.59	2.33	1.26	0.36	0.08	0.51	1.65	4.3	5.3	12.2	25.5	3.8	5.5	5.4	6.3	12.4	8.6
	Mica Ro-1st Sc Conc.	9.9	0.26	0.56	56.7	26.4	6.16	2.55	1.25	0.39	0.08	0.46	1.65	6.4	7.7	16.8	34.2	6.0	7.8	8.4	9.3	15.8	12.4
Mica Ro-Sc Conc.	12.0	0.28	0.60	58.4	25.2	5.66	2.82	1.27	0.44	0.08	0.44	1.65	8.2	9.7	19.4	38.1	8.1	9.6	11.3	11.0	18.3	15.0	
Mag Conc.	6.5	0.52	1.12	50.8	16.5	2.16	1.69	4.98	4.84	0.57	0.99	11.53	8.3	4.5	6.8	7.8	2.6	20.2	67.6	42.0	22.5	56.4	
Total Slimes	4.5	0.33	0.70	60.0	15.9	1.90	3.83	7.32	0.82	0.14	0.45	1.7	3.7	3.8	4.6	4.8	4.1	20.9	8.0	7.4	7.1	5.9	
Head (calc.)	100	0.41	0.87	72.6	15.6	1.79	4.21	1.59	0.46	0.09	0.29	1.33	100	100	100	100	100	100	100	100	100	100	100
E/S	3rd CI Conc. Non-Mag	15.9	2.50	5.38	65.1	23.0	0.47	1.11	1.34	0.11	0.16	0.55	0.93	66.2	14.5	22.2	3.8	4.6	17.4	4.1	20.5	24.2	10.1
	3rd CI Conc.	19.4	2.40	5.16	65.6	22.6	0.51	1.26	1.33	0.11	0.15	0.52	0.94	77.6	17.9	26.7	5.0	6.4	21.1	5.1	24.1	28.2	12.5
	2nd CI Conc.	20.4	2.35	5.05	65.9	22.4	0.53	1.33	1.33	0.11	0.15	0.51	0.95	79.8	18.9	27.8	5.5	7.1	22.2	5.4	24.9	29.1	13.2
	1st CI Conc.	23.0	2.11	4.54	67.2	21.4	0.63	1.69	1.31	0.11	0.14	0.47	0.89	81.0	21.8	30.0	7.3	10.2	24.6	5.8	25.6	30.1	14.1
	Ro Conc.	27.0	1.82	3.91	68.9	20.1	0.74	2.16	1.25	0.10	0.12	0.41	0.80	82.0	26.2	33.1	10.1	15.3	27.7	6.2	26.2	31.2	14.9
	Scav. Conc.	27.4	1.80	3.87	68.9	20.0	0.75	2.19	1.25	0.10	0.12	0.41	0.80	82.1	26.6	33.4	10.4	15.7	27.9	6.3	26.4	31.3	15.1
	Ro Tail	48.8	0.01	0.03	79.8	11.7	1.44	5.50	0.36	0.01	0.01	0.07	0.27	1.2	54.8	34.9	35.5	70.4	14.5	1.2	4.1	9.6	9.2
	Scav. Tail	48.5	0.01	0.03	79.8	11.7	1.44	5.51	0.36	0.01	0.01	0.07	0.27	1.1	54.5	34.6	35.3	70.0	14.3	1.1	3.9	9.4	9.0
	Mica Ro Conc.	3.1	0.32	0.69	59.9	24.8	5.73	2.68	0.65	0.22	0.07	0.24	1.44	1.7	2.6	4.7	9.0	2.2	1.6	1.6	1.7	2.1	3.1
	Mica Ro & 1st Sc Conc.	12.8	0.30	0.66	56.9	26.7	6.51	2.24	0.71	0.23	0.09	0.32	1.57	6.5	10.3	20.8	42.0	7.5	7.4	6.9	8.8	11.5	13.8
Mag Conc.	7.0	0.60	1.30	48.3	16.4	2.05	1.45	5.61	4.82	0.98	2.16	12.04	7.1	4.8	7.0	7.3	2.7	32.2	80.1	55.6	42.1	57.9	
Total Slimes	4.4	0.44	0.95	63.8	16.0	2.28	3.66	5.06	0.54	0.15	0.46	1.42	3.2	3.9	4.3	5.1	4.2	18.2	5.6	5.4	5.6	4.3	
Head (calc.)	100	0.60	1.29	71.0	16.4	1.98	3.82	1.22	0.42	0.12	0.36	1.46	100	100	100	100	100	100	100	100	100	100	
E/U	4th CI Conc. Non-Mag	9.6	2.55	5.49	61.6	23.7	0.57	0.97	2.49	0.25	0.15	0.67	1.02	56.4	8.4	14.4	2.6	2.5	13.6	3.0	10.8	20.4	4.2
	4th CI Conc.	12.7	2.27	4.89	59.3	22.7	0.70	0.95	3.23	0.98	0.20	0.77	1.02	67.0	10.8	18.3	4.3	3.3	23.6	15.7	19.5	31.2	14.6
	3rd CI Conc.	13.5	2.20	4.74	59.6	22.5	0.76	1.07	3.19	0.98	0.20	0.74	2.69	68.8	11.5	19.3	4.9	3.9	24.6	16.5	20.2	31.9	15.5
	2nd CI Conc.	14.5	2.10	4.51	60.1	22.2	0.85	1.24	3.14	0.97	0.19	0.70	2.67	70.5	12.5	20.5	5.9	4.9	26.1	17.6	21.0	32.5	16.5
	1st CI Conc.	16.2	1.94	4.18	61.1	21.8	0.93	1.51	3.06	0.94	0.18	0.65	2.58	72.6	14.1	22.3	7.3	6.6	28.3	18.9	22.0	33.6	17.8
	Ro Conc.	19.5	1.66	3.57	63.2	20.7	1.05	2.04	2.85	0.84	0.16	0.57	2.33	74.6	17.6	25.5	9.8	10.7	31.8	20.5	23.2	35.3	19.4
	Ro & Sc Conc.	21.4	1.55	3.34	64.1	20.2	1.09	2.24	2.76	0.81	0.15	0.53	2.25	76.8	19.5	27.5	11.2	13.0	33.8	21.7	24.2	36.4	20.6
	Ro Tail	54.8	0.03	0.07	80.8	11.4	1.30	5.06	0.57	0.06	0.01	0.09	0.37	4.3	63.2	39.5	34.2	75.1	17.8	3.8	5.0	16.3	8.7
	Sc Tail	52.9	0.02	0.04	81.1	11.2	1.29	5.09	0.52	0.04	0.01	0.09	0.33	2.2	61.2	37.6	32.8	72.8	15.7	2.6	4.0	15.2	7.4
	Mica Ro Conc.	8.2	0.21	0.45	51.4	29.6	7.73	1.61	0.77	0.79	0.08	0.20	2.71	4.0	6.0	15.5	30.6	3.6	3.6	8.1	5.0	5.2	9.5
Mica Ro & 1st Sc Conc.	11.6	0.23	0.49	53.2	27.9	7.11	1.86	0.91	0.89	0.09	0.24	2.85	6.1	8.8	20.5	39.6	5.8	6.0	12.9	7.5	8.9	14.1	
Mag Conc.	10.8	0.81	1.74	47.4	17.7	2.23	1.06	4.09	4.87	0.80	1.22	13.24	20.3	7.3	12.1	11.6	3.1	25.3	66.0	65.9	42.0	61.2	
Total Slimes	6.5	0.35	0.75	59.6	15.1	2.10	3.42	7.80	1.17	0.14	0.40	2.56	5.3	5.5	6.2	6.6	6.0	29.1	9.5	7.0	8.4	7.1	
Head (calc.)	100	0.43	0.93	70.1	15.8	2.08	3.70	1.75	0.80	0.13	0.31	2.34	100	100	100	100	100	100	100	100	100	100	

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Table 10-17: Batch flotation test results (Variability samples E_LG, E_HG, and EE_LG)

Test	Product	Wt.		Assays,%													Distribution,%							
		%	Li	Li ₂ O	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	MgO	MnO	P ₂ O ₅	Fe ₂ O ₃	Li	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	MgO	MnO	P ₂ O ₅	Fe ₂ O ₃	
E_LG	3rd Cl Conc. Non Mag.	8.5	2.42	5.21	62.8	23.3	0.67	1.07	2.37	0.12	0.17	1.07	1.03	61.0	7.5	12.7	2.6	2.2	14.0	2.1	12.3	24.9	5.2	
	3rd Cl Conc.	8.8	2.38	5.11	62.4	23.1	0.69	1.08	2.54	0.21	0.18	1.11	1.25	62.2	7.7	13.1	2.8	2.3	15.6	3.9	13.6	26.8	6.6	
	2nd Cl Conc.	10.4	2.18	4.69	63.5	22.4	0.78	1.38	2.50	0.22	0.17	0.99	1.25	67.4	9.2	15.0	3.7	3.5	18.1	4.7	15.0	28.3	7.8	
	1st Cl Conc.	12.7	1.88	4.06	65.2	21.3	0.89	1.84	2.45	0.22	0.15	0.85	1.19	70.8	11.5	17.4	5.1	5.7	21.6	5.7	16.1	29.6	9.0	
	Ro Conc.	16.6	1.47	3.17	68.0	19.5	0.99	2.51	2.27	0.19	0.12	0.68	1.02	72.6	15.8	20.8	7.5	10.2	26.3	6.6	17.1	31.0	10.1	
	Ro-Sc Conc.	20.0	1.25	2.69	69.6	18.4	1.03	2.86	2.17	0.17	0.10	0.59	0.92	74.1	19.4	23.7	9.4	14.1	30.2	7.3	17.7	32.1	10.9	
	Ro Tail	52.1	0.02	0.05	79.6	11.9	1.33	5.26	0.70	0.03	0.01	0.08	0.27	3.5	57.8	39.8	31.7	67.3	25.5	3.7	4.7	11.8	8.3	
	Sc Tail	48.7	0.01	0.03	79.7	11.8	1.34	5.31	0.64	0.03	0.01	0.08	0.26	2.0	54.2	36.9	29.7	63.4	21.7	3.0	4.1	10.7	7.5	
	Mica Ro Conc.	13.4	0.19	0.41	57.1	25.9	6.61	2.39	0.94	0.38	0.06	0.41	1.98	7.6	10.7	22.4	40.5	7.9	8.8	10.6	6.8	15.1	15.8	
	Mica Ro & 1st Sc Conc.	22.3	0.19	0.40	64.8	21.2	4.77	3.35	0.96	0.30	0.05	0.35	1.47	12.3	20.2	30.4	48.5	18.3	14.9	13.8	9.1	21.4	19.4	
	Mag Conc.	7.0	0.52	1.12	46.2	15.9	3.14	1.29	4.65	5.00	1.16	1.85	14.81	10.8	4.5	7.1	10.0	2.2	22.6	72.8	68.5	35.3	61.4	
	Total Slimes	2.3	0.28	0.60	60.5	15.1	2.42	3.61	7.58	1.01	0.10	0.39	1.55	1.9	2.0	2.2	2.6	2.1	12.2	4.9	1.9	2.5	2.1	
	Head (calc.)	100	0.34	0.73	71.7	15.6	2.20	4.08	1.44	0.48	0.12	0.37	1.68	100	100	100	100	100	100	100	100	100	100	
	EE_HG	2nd Cl Conc. 1	11.6	2.77	5.96	62.6	24.4	0.32	0.72	1.57	0.32	0.14	0.48	1.19	53.3	10.2	17.5	1.7	2.5	17.9	5.8	15.3	18.3	7.7
2nd Cl Conc. 1-2		14.1	2.74	5.89	62.8	24.3	0.34	0.76	1.55	0.32	0.14	0.47	1.22	64.0	12.4	21.2	2.2	3.2	21.5	7.1	18.8	21.8	9.5	
2nd Cl Conc.		15.4	2.71	5.84	63.1	24.2	0.36	0.82	1.53	0.32	0.14	0.46	1.24	69.0	13.6	23.0	2.6	3.8	23.2	7.7	20.2	23.2	10.5	
1st Cl Conc.		17.7	2.54	5.47	63.9	23.6	0.45	1.11	1.49	0.32	0.13	0.43	1.24	74.4	15.9	25.8	3.7	5.9	25.9	9.0	21.9	25.1	12.2	
Ro Conc.		21.8	2.18	4.70	65.9	22.1	0.59	1.70	1.41	0.31	0.12	0.38	1.15	78.7	20.1	29.8	5.9	11.1	30.2	10.4	24.3	27.3	13.9	
Ro-Sc Conc.		23.3	2.10	4.52	66.3	21.8	0.63	1.82	1.40	0.31	0.11	0.37	1.15	80.7	21.6	31.2	6.8	12.6	32.0	11.1	25.1	28.2	14.8	
Ro Tail		49.9	0.05	0.10	82.8	10.3	1.32	4.77	0.30	0.05	0.01	0.09	0.31	3.8	57.8	31.7	30.3	71.1	14.6	3.8	5.3	15.1	8.4	
Sc Tail		48.5	0.02	0.05	83.1	10.1	1.32	4.80	0.27	0.04	0.01	0.09	0.28	1.8	56.4	30.2	29.5	69.6	12.9	3.0	4.5	14.3	7.5	
Mica Ro Conc.		13.3	0.23	0.50	55.9	27.3	6.96	1.91	0.64	0.56	0.06	0.26	2.08	5.1	10.4	22.5	42.8	7.6	8.4	11.7	7.5	11.3	15.3	
Mica Ro & 1st Sc Conc.		16.2	0.25	0.54	58.7	25.4	6.25	2.21	0.67	0.54	0.06	0.26	1.95	6.7	13.3	25.4	46.7	10.7	10.7	13.7	8.8	13.7	17.5	
WHMS Mag Conc.		7.9	0.61	1.31	46.1	18.4	3.47	1.20	2.86	5.37	0.77	1.45	12.80	7.9	5.1	8.9	12.6	2.8	22.1	68.8	56.7	37.2	55.6	
Total Slimes		4.2	0.41	0.89	62.3	16.1	2.35	3.44	5.49	0.97	0.12	0.49	2.00	2.8	3.6	4.1	4.5	4.3	22.4	6.3	4.8	6.6	4.6	
Head (calc.)		100	0.61	1.30	71.4	16.2	2.17	3.35	1.02	0.64	0.11	0.31	1.81	100	100	100	100	100	100	100	100	100	100	
EE_LG		3rd Cl Conc. Non-Mag	7.0	2.64	5.68	63.1	24.2	0.55	0.91	1.63	0.10	0.16	0.74	0.90	59.0	6.1	11.1	1.7	1.6	10.6	1.6	11.4	17.8	5.2
	3rd Cl Conc.	7.0	2.64	5.67	63.1	24.2	0.55	0.91	1.65	0.11	0.16	0.74	0.92	59.1	6.1	11.1	1.7	1.6	10.8	1.7	11.6	18.0	5.3	
	2nd Cl Conc.	7.6	2.54	5.45	63.4	23.9	0.63	1.04	1.63	0.12	0.16	0.72	0.94	61.6	6.6	11.9	2.1	2.0	11.6	2.1	12.4	18.8	5.9	
	1st Cl Conc.	8.6	2.32	4.99	64.2	23.2	0.77	1.34	1.59	0.13	0.15	0.67	0.95	63.6	7.6	13.1	2.9	2.9	12.8	2.5	13.5	19.9	6.7	
	Ro Conc.	11.3	1.84	3.95	66.5	21.5	1.05	2.09	1.45	0.13	0.13	0.56	0.87	66.5	10.4	15.9	5.3	6.0	15.4	3.3	15.2	22.1	8.1	
	Ro-Sc Conc.	13.2	1.63	3.50	67.4	20.8	1.22	2.39	1.38	0.13	0.12	0.51	0.84	68.5	12.2	17.9	7.1	8.0	17.0	3.9	16.5	23.3	9.0	
	Ro Tail	59.8	0.03	0.06	81.0	11.5	1.65	5.00	0.22	0.03	0.02	0.09	0.17	4.9	66.6	44.9	43.7	75.4	12.5	4.5	13.2	19.3	8.6	
	Sc Tail	58.0	0.02	0.03	81.2	11.3	1.63	5.02	0.20	0.03	0.02	0.09	0.16	3.0	64.8	42.9	41.8	73.4	10.8	4.0	11.9	18.0	7.6	
	Pho Ro Conc.	2.4	0.71	1.53	69.0	15.7	1.41	3.55	3.36	0.28	0.12	1.23	0.88	5.5	2.3	2.5	1.5	2.2	7.7	1.6	3.0	10.4	1.8	
	Mica Ro Conc.	6.3	0.24	0.52	61.7	22.0	4.55	2.98	1.37	0.39	0.10	0.45	1.61	4.8	5.3	9.0	12.6	4.7	8.0	5.6	6.4	9.7	8.3	
	Mica Ro-Sc Conc.	15.6	0.22	0.46	59.6	24.1	5.49	2.65	0.93	0.40	0.09	0.29	1.64	10.8	12.8	24.7	38.0	10.5	13.6	14.2	15.1	15.9	21.0	
	Mag Conc.	6.2	0.46	1.00	50.1	17.1	2.78	1.50	4.14	4.74	0.73	1.19	10.67	9.2	4.3	7.0	7.7	2.4	24.1	67.5	46.3	25.6	54.5	
	Total Slimes	4.5	0.20	0.44	57.2	16.6	1.92	3.20	6.29	0.85	0.15	0.43	1.62	3.0	3.6	5.0	3.9	3.7	26.8	8.8	7.2	6.8	6.1	
	Head (calc.)	100	0.31	0.67	72.7	15.3	2.26	3.97	1.07	0.44	0.10	0.29	1.22	100	100	100	100	100	100	100	100	100	100	



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Table 10-18: Batch flotation test results (Variability samples S_F, and S_S)

Test	Product	Wt.		Assays,%													Distribution,%							
		%	Li	Li ₂ O	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	MgO	MnO	P ₂ O ₅	Fe ₂ O ₃	Li	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	MgO	MnO	P ₂ O ₅	Fe ₂ O ₃	
S_F	3rd Cl Conc. Non Mag.	13.6	2.59	5.58	62.2	24.4	0.66	1.03	2.01	0.20	0.16	0.71	0.93	71.3	11.8	21.4	4.6	3.7	20.0	4.6	20.8	28.5	7.6	
	3rd Cl Conc.	14.3	2.52	5.43	61.7	24.2	0.68	1.04	2.18	0.35	0.17	0.74	1.27	72.8	12.2	22.2	5.0	3.9	22.7	8.4	23.5	30.9	10.9	
	2nd Cl Conc.	15.6	2.41	5.18	62.1	23.8	0.77	1.22	2.16	0.35	0.17	0.69	1.28	76.0	13.5	24.0	6.2	5.1	24.6	9.3	24.9	31.8	12.0	
	1st Cl Conc.	17.4	2.24	4.82	62.8	23.3	0.87	1.49	2.14	0.34	0.16	0.64	1.25	78.8	15.2	26.1	7.8	6.9	27.0	10.1	26.5	32.9	13.1	
	Ro Conc.	21.0	1.92	4.13	64.6	22.0	1.02	2.02	2.05	0.31	0.14	0.56	1.13	81.3	18.8	29.7	10.9	11.3	31.4	11.2	28.2	34.6	14.3	
	Ro & Scav. Conc.	23.7	1.74	3.74	65.7	21.3	1.10	2.32	1.99	0.29	0.13	0.51	1.07	83.2	21.6	32.4	13.3	14.7	34.4	11.9	29.5	35.9	15.3	
	Ro Tail	55.2	0.03	0.06	81.4	11.0	1.48	4.97	0.45	0.04	0.01	0.12	0.26	3.0	62.4	39.2	41.9	73.1	18.0	3.4	6.3	19.9	8.6	
	Sc Tail	52.5	0.01	0.02	81.8	10.8	1.47	4.99	0.39	0.03	0.01	0.12	0.24	1.2	59.6	36.5	39.5	69.7	14.9	2.7	5.0	18.5	7.6	
	Mica Ro Conc.	9.2	0.23	0.50	55																			

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10.7.2 Locked-Cycle Flotation Tests

Three flotation locked-cycle tests (LCT) were undertaken on variability samples E_EF1, E_S, and EE_HG. The LCT flowsheet is shown in Figure 10-7. Reagent dosages for the tests are shown in Table 10-19. Test conditions were the same for the three tests. Table 10-20 - Projected LCT mass balances shows the projected mass balances based on the final cycles of each LCT. Concentrate grade ranged from 5.67% to 6.37% Li₂O with stage lithium recovery ranging from 63.8% to 81.2%. Iron in the concentrate ranged from 1.07% to 1.39% Fe₂O₃.

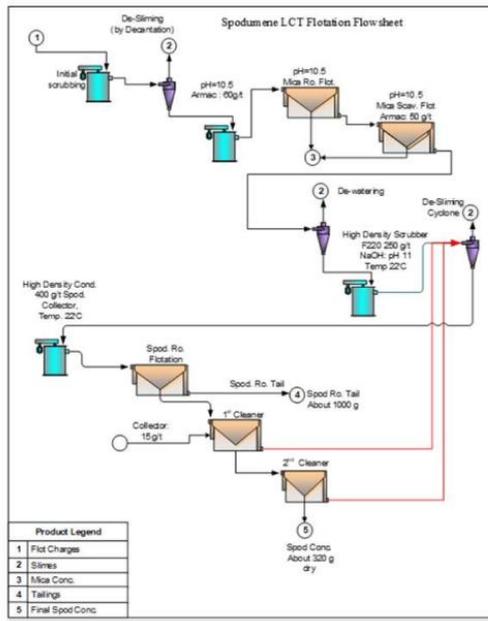


Figure 10-7 - Locked-cycle flotation flowsheet

Table 10-19 - LCT reagent dosages

Test	Reagent Dosage, g/t		
	Armac C/T	F220	FA-2
LCT	110	250	415

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Table 10-20 - Projected LCT mass balances

Sample	Combined Product	Wt. %	Assays %													Global Distribution %									
			Li	Li ₂ O	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	P ₂ O ₅	MgO	MnO	Fe ₂ O ₃	Li	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	CaO	P ₂ O ₅	MgO	MnO	Fe ₂ O ₃		
E_EF1	Li Cl Conc	9.9	2.63	5.67	59.9	25.0	0.88	0.51	2.51	1.00	0.35	0.17	1.39	63.8	8.2	15.8	4.7	1.3	17.7	36.2	6.7	20.1	8.7		
	Li Ro Tail	72.2	0.12	0.25	77.7	13.6	1.73	4.89	0.69	0.11	0.08	0.01	0.37	20.6	77.9	62.6	66.8	87.6	35.4	28.0	10.6	12.0	16.8		
	2nd Slime	2.66	0.35	0.75	63.0	15.9	1.58	3.81	5.63	0.39	0.69	0.12	1.66	2.3	2.3	2.7	2.2	2.5	10.7	3.8	3.5	3.7	2.8		
	Mica Ro Conc.	2.45	0.21	0.45	57.2	24.8	5.26	2.66	1.24	0.32	0.61	0.12	2.36	1.2	1.9	3.9	6.9	1.6	2.2	2.9	2.9	3.4	3.7		
	Mica Sc Conc.	2.15	0.22	0.46	59.3	23.7	4.88	2.87	1.28	0.33	0.60	0.10	2.22	1.1	1.8	3.2	5.6	1.5	1.9	2.6	2.5	2.6	3.0		
	1st Slime	3.7	0.30	0.64	62.0	17.2	1.94	3.69	4.82	0.44	0.81	0.14	2.39	2.7	3.2	4.1	3.8	3.4	12.7	6.0	5.8	6.4	5.6		
E_S	WHIMS Mag	6.9	0.49	1.06	47.9	17.6	2.71	1.22	3.97	0.82	5.09	0.64	13.63	8.2	4.6	7.7	10.0	2.1	19.4	20.6	67.9	51.9	59.4		
	Head [Calc.]	100	0.41	0.88	72.0	15.7	1.87	4.03	1.41	0.27	0.52	0.08	1.58	100	100	100	100	100	100	100	100	100	100		
	Li Cl Conc	17.4	2.96	6.37	63.4	24.5	0.37	0.74	1.35	0.65	0.14	0.17	1.07	81.2	15.4	26.1	3.3	3.4	17.7	30.3	5.4	22.8	11.8		
	Li Ro Tail	63.6	0.06	0.13	79.3	12.4	1.60	5.22	0.47	0.09	0.03	0.02	0.43	6.0	70.7	48.4	52.6	87.2	22.7	14.9	4.7	8.1	17.4		
	2nd Slime	1.70	0.49	1.06	62.2	14.2	1.63	3.61	7.81	0.44	0.64	0.15	1.04	1.3	1.5	1.5	1.4	1.6	10.0	2.0	2.4	1.9	1.1		
	Mica Ro Conc.	4.80	0.20	0.44	51.8	30.0	7.99	1.65	0.54	0.22	0.31	0.09	2.01	1.5	3.5	8.8	19.8	2.1	2.0	2.8	3.3	3.5	6.1		
EE_HG	Mica Sc Conc.	3.21	0.23	0.50	53.5	29.0	7.55	1.85	0.63	0.25	0.33	0.10	2.01	1.2	2.4	5.7	12.5	1.6	1.5	2.1	2.3	2.5	4.1		
	1st Slime	2.0	0.39	0.85	56.2	16.0	2.47	3.13	9.83	0.59	0.87	0.21	2.09	1.2	1.5	1.9	2.5	1.6	14.5	3.1	3.8	3.2	2.6		
	WHIMS Mag	7.4	0.65	1.39	47.8	16.8	2.06	1.36	5.68	2.24	4.78	1.02	12.16	7.5	4.9	7.6	7.8	2.6	31.6	44.7	78.0	58.1	56.9		
	Head [Calc.]	100	0.63	1.36	71.3	16.3	1.94	3.81	1.33	0.37	0.45	0.13	1.58	100	100	100	100	100	100	100	100	100	100		
	Li Cl Conc	17.5	2.69	5.80	62.8	24.3	0.39	0.80	1.61	0.54	0.33	0.15	1.21	77.5	15.3	26.2	3.2	4.2	29.9	31.2	9.6	25.1	12.6		
	Li Ro Tail	59.7	0.09	0.19	80.9	11.3	1.53	4.59	0.35	0.09	0.08	0.01	0.30	8.9	67.6	41.7	42.3	82.4	22.5	17.7	7.9	5.7	10.5		

10.8 OVERALL SPODUMENE MASS BALANCES (DMS AND FLOTATION)

Overall (DMS and flotation) spodumene mass balances are presented in Table 10-21. Mass pull to the combined concentrates ranged from 6.6% to 16.7%. Combined concentrate grades ranged from 5.67% to 6.36% Li₂O with lithium recovery from 54.2% to 77.4%. Iron in the combined concentrates ranged from 0.92% to 1.59% Fe₂O₃.



Table 10-21 - Overall spodumene mass balances (DMS and flotation) for each variability sample

Sample	Stage	Combined Products	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
E-EF1	DMS	Conc. Non-Mag	6.1	2.94	6.32	65.9	25.0	0.84	0.19	0.65	0.41	0.11	37.2	5.70	9.30	2.51	0.87	1.04	1.01	2.33	
		Conc. Mag	3.1	0.36	0.77	48.7	18.0	11.8	7.81	1.66	1.46	0.65	2.31	2.15	3.42	18.05	18.81	1.35	1.86	6.82	
		Tailings	29.2	0.37	0.15	74.5	14.6	0.43	0.30	4.76	3.90	0.26	4.24	30.9	26.0	6.20	6.69	36.6	46.6	25.4	
	Mag Sep (Flotation)	MIMS Mag	5.7	0.38	0.82	65.8	17.2	4.52	1.73	3.61	2.19	0.39	4.46	5.29	5.94	12.6	7.58	5.37	5.07	7.39	
		LONGI Mag	4.1	0.77	1.66	54.5	20.7	7.57	2.84	1.61	2.91	0.65	6.53	3.16	5.16	15.24	8.98	1.73	4.87	8.89	
		LONGI Midds	1.2	0.67	1.44	51.2	20.3	9.76	2.99	1.41	3.06	0.65	1.65	0.86	1.47	5.70	2.75	0.44	1.49	2.58	
		WHIMS Mag	3.4	0.48	1.04	47.5	17.5	13.9	4.02	1.19	2.71	0.82	3.42	2.30	3.65	23.4	10.6	1.06	3.78	9.4	
		LI Cl Conc.	4.9	2.61	5.60	59.6	25.0	1.46	2.60	0.51	0.94	1.03	26.6	4.2	7.5	3.53	9.9	0.66	1.90	17.0	
	Flotation LCT	LI Ro Tail	36.9	0.14	0.29	77.5	13.7	0.38	0.70	4.84	1.73	0.11	10.5	40.7	30.9	6.98	19.9	47.0	26.2	13.2	
		2nd Slime	1.1	0.36	0.78	63.5	16.1	1.71	5.10	3.82	1.59	0.40	0.83	0.99	1.08	0.93	4.34	1.10	0.72	1.46	
		Mica Ro Conc.	1.3	0.21	0.45	57.8	24.4	2.32	1.26	2.75	5.12	0.32	0.57	1.09	1.98	1.51	1.29	0.96	2.78	1.44	
		Mica Scav. Conc.	1.1	0.21	0.46	59.8	23.4	2.17	1.26	2.93	4.80	0.32	0.49	0.95	1.60	1.19	1.09	0.86	2.19	1.20	
		1st Slime	1.9	0.30	0.65	62.3	17.0	2.33	4.81	3.71	1.88	0.44	1.20	1.69	1.98	2.18	7.09	1.86	1.47	2.84	
	Combined	Head (Calc.)	100	0.48	1.04	70.3	16.4	2.03	1.29	3.80	2.44	0.30	100	100	100	100	100	100	100	100	
		Head (Dir.)	0.49	1.05	69.9	16.6	2.01	1.26	3.70	2.49	0.33										
		Combined Conc.	11.0	2.79	6.00	63.1	25.0	1.11	1.27	0.59	0.65	0.53	63.8	9.9	16.8	6.0	10.8	1.7	2.9	19.4	

Sample	Stage	Product	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
E-EF2	DMS	Conc. Non-Mag	4.05	3.00	6.45	65.2	25.1	0.79	0.30	0.60	0.54	0.17	28.4	3.73	6.33	1.79	0.81	0.58	0.96	2.15	
		Conc. Mag	2.72	0.37	0.79	48.5	17.4	12.5	7.89	1.96	1.13	0.67	2.33	1.87	2.95	19.2	14.1	1.28	1.36	5.58	
		Tailings	30.5	0.07	0.14	74.1	14.7	0.40	0.50	5.27	3.35	0.29	4.74	31.9	27.9	6.81	9.97	38.5	44.9	27.0	
	Mag Sep (Flotation)	MIMS Mag	3.5	0.36	0.77	65.3	16.4	4.72	2.14	3.8	2.14	0.4	2.91	3.19	3.53	9.2	4.85	3.16	3.26	4.23	
		LONGI Mag	6.2	0.78	1.68	55.4	20.3	6.72	3.65	1.86	2.79	0.78	11.4	4.88	7.87	23.5	14.9	2.79	7.66	14.8	
		WHIMS Mag	3.4	0.52	1.12	50.8	16.5	11.5	4.98	1.69	2.16	0.99	4.18	2.47	3.52	22.3	11.2	1.40	3.28	10.4	
		3rd Cl Conc. Non-Mag	4.4	2.74	5.89	61.0	24.2	1.05	2.61	0.74	0.55	0.82	28.4	3.8	6.7	2.62	7.6	0.79	1.08	11.1	
	Batch Flotation	Cl Tail	3.0	1.11	2.40	68.0	19.5	1.02	2.04	3.38	1.29	0.25	7.76	2.9	3.6	1.71	4.0	2.4	1.7	2.3	
		Ro Tail	33.4	0.05	0.11	80.4	12.2	0.25	0.72	5.30	1.21	0.10	4.02	38.0	25.3	4.63	15.8	42.5	17.9	10.6	
		Mica Ro & Sc Conc.	6.4	0.28	0.60	58.4	25.2	1.65	1.27	2.82	5.66	0.44	4.14	5.27	10.0	5.93	5.30	4.32	15.9	8.49	
		Total Slimes	7.4	0.33	0.70	60.0	15.9	1.73	7.23	3.83	1.90	0.45	1.84	7.04	7.38	7.95	11.6	7.77	7.07	3.79	

Combined	Head (Calc.)	100	0.43	0.92	70.8	16.1	1.78	1.53	4.16	2.27	0.33	100	100	100	100	100	100	100	100	
	Head (Dir.)		0.46	0.99	70.0	16.4	1.80	1.53	3.97	2.34	0.33									
	Combined Conc.	8.5	2.86	6.16	63.0	24.6	0.92	1.51	0.67	0.55	0.51	56.7	7.6	13.0	4.4	8.4	1.4	2.0	13.3	

Sample	Stage	Combined Products	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
E ₁ S	DMS	Conc. Non-Mag	2.8	2.96	6.36	66.1	24.3	1.23	0.29	0.57	0.44	0.13	15.1	2.6	4.0	2.1	0.8	0.4	0.5	1.1	
		Conc. Mag	2.2	0.28	0.61	47.0	60.4	17.91	0.22	0.10	0.09	0.03	1.1	1.5	7.8	23.7	0.5	0.1	0.1	0.2	
		Middlings (-3.3 +1 mm)	7.5	0.80	1.72	70.8	16.8	1.79	1.39	3.01	1.77	0.43	11.0	7.5	7.4	8.1	10.4	5.9	5.5	9.4	
		Tailings	27.4	0.07	0.16	74.7	14.4	0.41	0.34	4.72	4.10	0.30	3.7	28.6	23.2	6.8	9.1	33.8	46.0	24.2	
	Mag Sep (Flotation)	MIMS Mag	1.6	0.48	1.03	67.6	16.7	4.16	1.38	3.80	2.23	0.48	1.4	1.5	1.6	4.0	2.2	1.6	1.5	2.3	
		WHIMS Mag	4.3	0.65	1.39	47.8	16.8	12.16	5.68	1.36	2.06	2.24	5.1	2.9	4.2	31.5	24.3	1.5	3.6	28.1	
	Flotation LCT	LI Cl Conc.	10.2	2.96	6.36	63.4	24.5	1.07	1.35	0.74	0.37	0.65	54.9	9.0	14.6	6.5	13.6	2.0	1.5	19.0	
		LI Ro Tail	37.2	0.06	0.13	79.3	12.4	0.43	0.47	5.22	1.60	0.09	4.0	41.2	27.1	9.6	17.5	50.7	24.4	9.4	
		2nd Slime	1.0	0.49	1.06	62.2	14.2	1.04	7.81	3.61	1.63	0.44	0.9	0.9	0.8	0.6	7.7	0.9	0.7	1.3	
		Mica Ro Conc.	2.8	0.20	0.44	51.8	30.0	2.01	0.54	1.65	7.99	0.22	1.0	2.0	4.9	3.4	1.5	1.2	9.2	1.8	
Mica Sc Conc.		1.9	0.23	0.49	53.5	29.0	2.01	0.63	1.85	7.55	0.25	0.8	1.4	3.2	2.3	1.2	0.9	5.8	1.3		
1st Slime	1.1	0.39	0.85	56.2	16.0	2.09	9.83	3.13	2.47	0.59	0.8	0.9	1.1	1.4	11.2	0.9	1.2	2.0			
Combined	Head (Calc.)	100	0.55	1.18	71.5	17.0	1.67	1.01	3.83	2.44	0.34	100	100	100	100	100	100	100	100		
	Head (Dir.)		0.48	1.03	67.6	16.7	4.16	1.38	3.80	2.23	0.48										
Combined Conc.	12.9	2.96	6.36	64.0	24.5	1.11	1.12	0.70	0.38	0.53	70.0	11.6	18.6	8.6	14.4	2.4	2.0	20.1			



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Sample	Stage	Product	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
E ₁ L	DMS	Conc. Non-Mag	7.45	3.05	6.56	65.6	24.8	0.84	0.18	0.59	0.47	0.12	44.0	6.89	11.4	3.24	0.97	1.13	1.42	2.95	
		Conc. Mag	2.33	0.57	1.24	48.2	18.3	11.7	7.11	1.51	1.56	0.99	2.59	1.58	2.63	14.0	12.28	0.90	1.47	7.64	
		Tailings	30.4	0.05	0.11	75.0	14.4	0.36	0.36	5.19	3.76	0.26	2.90	32.1	27.1	5.56	8.08	4.06	46.2	26.2	
		MIMS Mag	2.2	0.42	0.90	64.9	16.2	6.21	1.94	3.48	2.28	0.41	1.79	2.02	2.21	7.1	3.18	1.98	2.03	3.00	
	Mag Sep (Flotation)	WHIMS Mag	6.2	0.81	1.74	47.4	17.7	13.2	4.09	1.06	2.23	1.22	9.78	4.17	6.81	42.6	18.9	1.70	5.63	25.2	
		4th Cl Conc. Non-Mag	5.5	2.55	5.48	61.6	23.7	1.02	2.49	0.97	0.57	0.67	27.2	4.8	8.1	2.90	10.2	1.38	12.7	12.2	
	Batch Flotation	Cl Tail	3.9	0.55	1.19	79.8	19.0	1.86	2.40	4.62	1.92	0.22	4.13	4.4	4.5	3.71	6.9	4.6	3.0	2.8	
		Ro Tail	31.6	0.03	0.07	80.8	11.4	0.37	0.57	5.06	1.30	0.09	2.10	36.0	22.2	6.04	13.3	4.2	16.6	9.75	
		Mica Ro & Sc Conc.	6.7	0.23	0.49	53.2	27.9	2.85	0.91	1.86	7.11	0.24	2.94	5.01	11.5	9.83	4.52	3.20	19.2	5.32	
	Combined	Head (Calc.)	100	0.52	1.11	71.0	16.2	1.94	1.35	3.88	2.47	0.30	100	100	100	100	100	100	100	100	
Head (Dir.)			0.47	1.01	70.3	16.3	1.81	1.29	3.93	2.46	0.32										
Combined Conc.	13.0	2.84	6.10	63.9	24.4	0.92	1.16	0.75	0.51	0.35	71.2	11.7	19.5	6.1	11.2	2.5	2.7	15.2			

Sample	Stage	Product	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
E ₁ U	DMS	Conc. Non-Mag	2.94	2.98	6.42	65.1	24.7	1.11	0.55	0.57	0.58	0.37	27.4	2.68	4.62	1.98	1.33	0.40	0.61	3.04	
		Conc. Mag	2.23	0.47	1.01	48.2	16.9	13.2	7.77	1.69	1.30	0.85	3.28	1.50	2.40	17.8	14.4	0.88	1.03	5.33	
		Tailings	32.9	0.05	0.10	73.6	15.0	0.46	0.37	5.14	4.14	0.30	4.79	33.9	31.3	9.22	10.2	39.7	48.6	27.3	
		MIMS Mag	5.8	0.3	0.65	67.2	16.6	4.2	1.75	3.78	2.83	0.45	5.42	5.43	6.09	14.7	8.37	5.12	5.83	7.29	
	Mag Sep (Flotation)	WHIMS Mag Conc.	3.9	0.52	1.12	46.2	15.9	14.8	4.65	1.29	3.14	1.85	6.39	2.54	3.96	35.2	15.1	1.19	4.39	20.4	
		3rd Cl Conc. Non-Mag	4.8	2.42	5.20	62.8	23.3	1.03	2.37	1.07	0.67	1.07	36.2	4.2	7.1	2.99	9.4	1.20	1.14	14.4	
	Batch Flotation	Cl Tail	4.4	0.44	0.94	76.1	15.4	0.32	1.67	4.33	1.28	0.14	5.99	4.7	4.3	0.86	6.1	4.5	2.0	1.7	
		Ro Tail	29.3	0.02	0.05	79.6	11.9	0.27	0.70	5.26	1.33	0.08	2.09	32.6	22.1	4.79	17.1	36.1	13.9	6.79	
		Mica Ro & Sc Conc.	12.5	0.19	0.40	64.8	21.2	1.47	0.96	3.35	4.77	0.35	7.29	11.4	16.9	11.2	9.97	9.83	21.3	12.3	
	Combined	Total Slimes	1.3	0.28	0.60	60.5	15.1	1.55	7.58	3.61	2.42	0.39	1.14	1.10	1.25	1.22	8.18	1.10	1.12	1.44	
Head (Calc.)		100	0.32	0.69	71.4	15.7	1.65	1.21	4.26	2.80	0.36	100	100	100	100	100	100	100	100		
Head (Dir.)		0.32	0.69	70.7	16.0	1.89	1.32	4.19	2.90	0.39											
Combined Conc.	7.7	2.63	5.67	63.7	23.8	1.06	1.67	0.88	0.64	0.80	63.6	6.9	11.7	5.0	10.7	1.6	1.8	17.4			

Sample	Stage	Product	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
E ₁ HG	DMS	Conc. Non-Mag	5.0	2.85	6.12	66.9	23.9	0.91	0.22	0.54	0.43	0.16	24.3	4.68	7.35	2.72	1.30	0.75	0.89	2.62	
		Conc. Mag	1.3	0.57	1.24	49.0	17.5	11.1	6.43	1.03	1.51	0.59	1.30	0.91	1.43	8.87	9.93	0.38	0.83	2.54	
		Tailings	23.8	0.09	0.18	74.4	14.7	0.48	0.33	5.10	3.60	0.31	3.47	24.8	21.5	6.88	9.25	34.0	35.4	23.8	
		MIMS Mag	3.6	0.46	0.99	63.9	16.6	6.53	1.33	3.21	2.58	0.43	2.81	3.19	3.65	14.0	5.53	3.21	3.81	4.97	
	Mag Sep (Flotation)	WHIMS Mag	5.5	0.55	1.18	48.0	18.2	11.9	2.79	1.36	3.33	1.42	5.17	3.70	6.18	39.2	17.9	2.09	7.58	25.4	
		Cl Conc.	11.7	2.66	5.72	62.7	24.2	1.24	1.61	0.82	0.41	0.54	53.1	10.3	17.4	8.73	21.8	2.69	1.99	20.5	
	Flotation LCT	Ro Tail	38.9	0.08	0.17	81.3	11.1	0.28	0.35	4.63	1.49	0.09	5.40	44.3	26.6	6.57	15.9	50.5	23.9	11.7	
		2nd Slime	0.6	0.51	1.10	64.3	13.2	0.92	7.56	3.63	1.30	0.38	0.49	0.51	0.46	0.31	4.96	0.57	0.30	0.70	
		Mica Ro Conc.	5.6	0.20	0.44	52.9	28.8	2.24	0.59	1.69	7.51	0.19	1.95	4.17	9.98	7.58	3.86	2.67	17.5	3.45	
		Mica Sc Conc.	3.0	0.26	0.55	61.2	23.1	1.95	0.80	2.56	5.36	0.24	1.33	2.59	4.30	3.54	2.82	2.17	6.70	2.35	
1st Slime		1.1	0.39	0.83	60.8	16.7	2.45	5.50	3.30	2.59	0.57	0.70	0.90	1.08	1.55	6.74	0.97	1.13	1.93		
Combined	Head (Calc.)	100	0.58	1.26	71.4	16.2	1.66	0.86	3.57	2.42	0.31	100									

v5	Batch Flotation	Cl Tail	3.6	0.63	1.35	70.8	17.5	0.83	1.77	4.13	1.73	0.18	4.73	3.6	4.0	1.79	5.2	3.8	2.5	1.9
		Ro Tail	29.7	0.03	0.06	81.4	11.0	0.26	0.45	4.97	1.48	0.12	1.70	34.0	20.7	4.57	10.8	37.9	17.3	10.7
		Mica Ro & Sc Conc.	7.4	0.25	0.53	61.0	23.5	1.22	1.08	2.87	5.33	0.44	3.80	6.30	10.9	5.35	6.48	5.41	15.4	9.52
		Total Slimes	1.4	0.37	0.79	62.8	15.6	1.41	5.79	3.72	2.07	0.39	1.07	1.22	1.36	1.17	6.52	1.32	1.13	1.61
	Combined	Head (Calc.)	100	0.48	1.03	71.2	15.8	1.68	1.23	3.90	2.54	0.34	100	100	100	100	100	100	100	100
	Head (Dir.)		0.47	1.01	70.1	16.1	2.00	1.48	3.75	2.44	0.34									
	Combined Conc.		13.3	2.67	5.74	63.6	24.4	0.95	1.27	0.95	0.60	0.47	74.6	11.9	20.6	7.5	13.8	3.2	3.2	18.6

Sample	Stage	Combined Products	Wt. %	Assays (%)										Distribution (%)							
				Li	Li ₂ O	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Li	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	
v5	DMS	Conc. Non-Mag	2.2	3.17	6.82	64.9	25.3	1.12	0.27	0.43	0.33	0.13	13.3	2.0	3.4	1.0	0.4	0.3	0.3	0.8	
		Conc. Mag	2.4	0.41	0.87	48.2	41.0	15.40	0.20	0.13	0.08	0.13	1.8	1.6	5.8	15.3	0.3	0.1	0.1	0.8	
		Middlings (-3.3+1 mm)	4.7	0.76	1.63	70.6	16.4	2.44	1.82	2.87	1.64	0.43	6.8	4.7	4.6	4.8	6.0	3.7	3.4	5.4	
		Tailings	26.7	0.08	0.17	73.9	14.4	0.47	0.43	4.74	3.70	0.32	4.1	28.2	23.1	5.3	8.0	34.6	43.8	22.4	
		3rd Cl Conc. Non-Mag	9.3	2.73	5.87	62.0	24.4	1.70	1.90	0.66	0.37	0.79	48.4	8.3	13.7	6.7	12.4	1.7	1.5	19.6	
	Mag Sep (Flotation)	MIMS Mag	2.1	0.47	1.01	63.0	17.2	6.22	2.48	3.24	2.29	0.56	1.9	1.9	2.2	5.5	3.7	1.9	2.1	3.1	
		WHIMS Mag	7.4	0.59	1.28	46.8	15.8	15.0	6.09	1.18	1.49	1.25	8.4	5.0	7.1	47.0	31.9	2.4	4.9	24.7	
	Batch Flotation	Cl Tail	4.9	0.73	1.56	69.3	18.1	1.44	1.97	3.74	1.71	0.19	6.7	4.8	5.3	2.9	6.8	5.0	3.7	2.4	
		Ro Tail	32.2	0.05	0.10	79.5	12.2	0.25	0.61	5.06	1.62	0.09	2.9	36.6	23.7	3.4	13.7	44.6	23.1	8.0	
		Mica Ro & 1st Sc Conc.	5.5	0.33	0.71	57.0	25.4	2.14	1.45	2.28	5.94	0.60	3.4	4.5	8.3	4.9	5.5	3.4	14.4	8.8	
		Total Slimes	2.7	0.44	0.95	59.8	16.7	2.79	6.00	3.21	2.16	0.58	2.2	2.3	2.7	3.1	11.3	2.4	2.6	4.1	
	Combined	Head (Calc.)	100	0.53	1.13	69.8	16.6	2.38	1.42	3.65	2.25	0.38	100	100	100	100	100	100	100	100	
		Head (Dir.)		0.47	1.01	63.0	17.2	6.22	2.48	3.24	2.29	0.56									
		Combined Conc.		11.5	2.81	6.05	62.6	24.6	1.59	1.59	0.62	0.36	0.66	61.7	10.3	17.1	7.7	12.8	1.9	1.9	20.3

10.9 OVERVIEW – LITHIUM HYDROXYDE PILOT PLANT

In 2021, Piedmont engaged Metso:Outotec to undertake pilot plant testwork using their proprietary Lithium Hydroxide Process. The spodumene concentrate sample used for the testwork was produced during concentrator pilot plant operation in 2020 at SGS Canada Inc. The spodumene concentrate was calcined by Metso:Outotec at their laboratory in Oberursel, Germany. The calcined concentrate was sent to Metso:Outotec Research Center in Pori, Finland for hydrometallurgical pilot plant testing.

The pilot plant flowsheet (Figure 10-8: Pilot plant flowsheet) tested included: soda leaching, cold conversion, secondary conversion, ion exchange, lithium hydroxide crystallization, and carbonation.

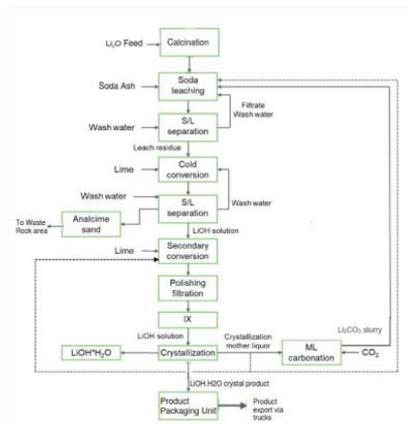


Figure 10-8: Pilot plant flowsheet

The pilot plant operated for approximately 10 days. Roughly 100 kg of calcined spodumene concentrate was fed into the plant. The process produced lithium hydroxide monohydrate (LiOH.H2O) and lithium carbonate (Li2CO3) slurry.

to the pilot plant. The average total lithium extraction achieved in soda leaching and cold conversion was 89% during the first 136 h of operation. Process recycles were incorporated in the pilot plant with no significant accumulation of impurities in the process. First stage lithium hydroxide crystallization was operated continuously during the pilot plant. Second stage crystallization was operated in batches after the completion of the continuous pilot plant. Impurities levels in the final battery-quality lithium hydroxide monohydrate product were typically low with Al <10 ppm, Ca <10 ppm, Fe <20 ppm, K <10 ppm, and Si <40 ppm. All other metal impurities were below detection limits.

10.10 CONCENTRATE CALCINATION

The spodumene concentrate sample tested was a combined DMS and flotation concentrate produced during pilot plant operation at SGS Canada Inc. in 2020. The spodumene concentrate was calcined in a continuous fluidized bed furnace at the Metso:Outotec laboratory in Oberursel, Germany. Calcined spodumene concentrate assays are shown in Table 10-22: Calcined spodumene concentrate assays.

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Calcined samples were submitted for X-ray diffraction analysis which showed the presence of three spodumene phases (α , β , and γ). Semi-quantitative mineral analysis using the Rietveld refinement method was undertaken on the samples. Results showed 98% of the spodumene was converted to the leachable β - and γ -spodumene phases.

Table 10-22: Calcined spodumene concentrate assays

Element	Method		Piedmont calcine barrel 2
Li	ICP	%	2.94
Li ₂ O	Calc.	%	6.33
Be	ICP	%	0.034
B	ICP	%	0.028
Na	ICP	%	0.52
Mg	ICP	%	<0.01
Al	ICP	%	12.3
P	ICP	%	0.082
K	ICP	%	0.35
Ca	ICP	%	0.29
Ti	ICP	%	0.007
Mn	ICP	%	0.087
Fe	ICP	%	0.46
Zn	ICP	%	<0.05
As	ICP	%	<0.02
Ta	ICP	%	<0.01
Bi	ICP	%	<0.02
SiO ₂	Colorimetry	%	64.5

10.11 SODA ASH LEACHING

Slurry preparation entailed pulping the calcined spodumene concentrate with water, soda ash, and recycle solutions prior to leaching. Leaching was carried out in a six-compartment electrically heated (jacketed) 65-L titanium autoclave. Soda ash used for piloting was sourced by PLL from Genesis Alkali. Soda ash dosage to slurry preparation was adjusted based on the residual sodium concentration in the leach filtrates. Crystallization mother liquor was recycled to soda leaching.

The total amount of calcine processed was approximately 90 kg to 100 kg of calcine. Approximately 160 kg of wet filter cakes were collected from the soda leach residue filtration. In total, approximately 250 L of filtrates and 68 L of wash filtrates were collected from the soda leach residue filtration and washing. Most of the soda leach filtrates were recycled to soda leach slurry preparation.

Solution analyses of the soda leaching filtrate are shown in Figure 10-9. The concentrations of aluminum (<3 mg/L), calcium (<6 mg/L), and potassium (<400 mg/L) were relatively low throughout piloting. Silicon concentrations ranged from roughly 500 mg/L to 120 mg/L. Lithium concentration was generally in the range of lithium carbonate solubility (ca. 2000 mg/L). The sodium concentration in the filtrate was mostly at a suitable level of roughly 4 g/L.

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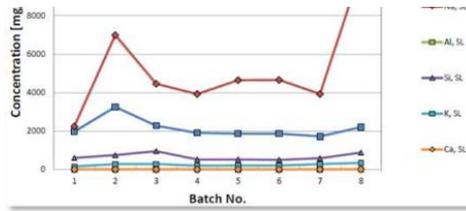


Figure 10-9: Soda leaching filtrate solution assays

The total lithium and acid soluble lithium concentrations in the soda leach filter cakes varied, but in the individual samples, the total and acid soluble lithium concentrations were similar suggesting that the soda leaching reaction was complete and most of the lithium in the feed material had been converted to lithium carbonate. During the pilot, the Li concentration increased as was expected primarily due to process recycles.

10.12 COLD CONVERSION

Cold conversion was undertaken in two OKTOP stainless steel reactors in series. The soda leach residue was pulped with wash solution during slurry preparation. Filtrate was pumped to a buffer tank and fed secondary conversion. Solids were removed from the filter as required and washed with deionized water. Roughly 150 kg of soda leaching residue was fed to cold conversion during piloting.

In total ~185 kg of wet analcime filter cakes were produced during the pilot.

The results of solution analyses from cold conversion filtrates are presented in Figure 10-10. During the first 50 hours of operation, the lithium concentration in solution increased from roughly 4 g/L to 7.5 g/L. Sodium concentration was relatively stable at roughly 1 g/L. The average Potassium, Calcium, Aluminium and Silicon concentrations were 50 mg/L, 25 mg/L, 30 mg/L and 50 mg/L, respectively.

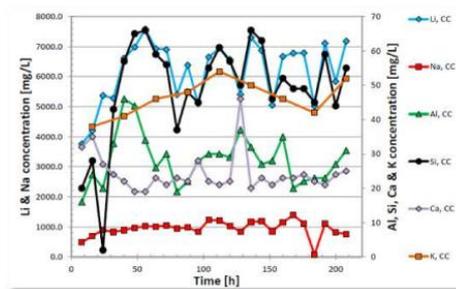


Figure 10-10: Cold conversion (CC) filtrate analysis

The lithium concentration in the cold conversion residue generally ranged from 0.17% to 0.25%. The acid soluble lithium concentrations of the cake samples followed the same trends as total lithium concentration.

Average lithium extraction was 89% for the first 136 h of operation. Lithium extraction was typically between 85% and 91%.

10.13 SECONDARY CONVERSION

Secondary conversion was carried out in two OKTOP stainless steel reactors in series. Cold conversion filtrate and lime milk were pumped continuously to the first reactor. Slurry was dewatered by vacuum filtration. In total, roughly 8 kg of wet polishing filter cakes were produced during piloting. Filtrate was continuously pumped to a buffer tank which fed ion exchange.

The results of solution analyses from the secondary conversion filtrates are presented in Figure 10-11. The lithium concentration increased to greater than 6 g/L during the first 50 hours of operation, after which the concentration generally fluctuated between 6 g/L and 7 g/L. Sodium concentrations were similar to levels in cold conversion. Potassium and calcium concentrations were reasonably stable with average concentrations 50 mg/L and 30 mg/L, respectively. Average silicon concentration was roughly 50 mg/L in cold conversion and decreased to roughly 20 mg/L in secondary conversion.

Crystallization mother liquor was recycled to secondary conversion.

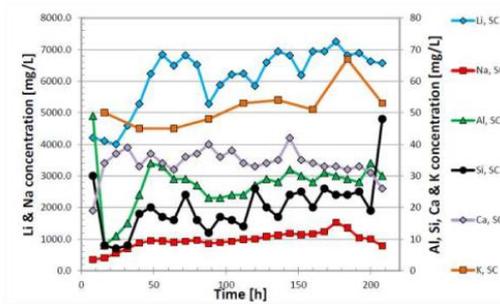


Figure 10-11: Secondary conversion filtrate assays

10.14 ION EXCHANGE

Polished solution from secondary conversion fed ion exchange (IX) which was operated continuously. IX consisted of two columns in series, packed with weakly acidic chelating cation exchange resin Lewatit MDS TP 208 with total bed volume of 500 mL. One additional 250 mL column was available as a backup to be changed into operation when resin regeneration was necessary. IX product solution fed the Pre-Evaporation stage. All the filtrate from the polishing filter was fed through IX during piloting. Roughly 220 L of solution was processed through IX during piloting. At certain times during the piloting, the first column was taken off-line for regeneration.

The results of IX product solution analyses are shown in Figure 10-12. Lithium concentration increased to roughly 7 g/L during the first 60 hours of operation. Aluminum, sodium and silicon concentrations were relatively stable. The main function of the ion exchange stage was to remove calcium ions from the solution, along with any other divalent metal cations. Calcium removal was generally efficient with the concentration decreasing from an average of 34 mg/L in secondary conversion to less than 1 mg/L in the IX product solution. IX product solution fed pre-evaporation and LiOH crystallization stages.

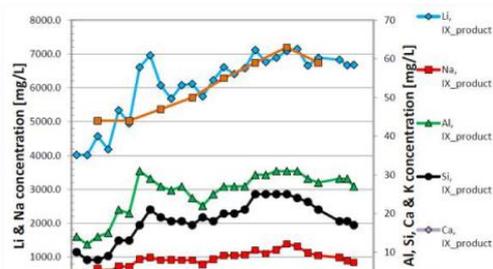




Figure 10-12: IX product solution assays

10.15 PRE-EVAPORATION AND FIRST-STAGE LITHIUM HYDROXIDE CRYSTALLIZATION

IX product solution was continuously fed to the pre-evaporator. The vapor head of the pre-evaporator was a 5-liter reactor with a heated jacket. Vacuum was produced inside the pre-evaporator using a vacuum pump. Solution was heated to evaporate water and concentrate the lithium hydroxide solution.

The first-stage Lithium hydroxide crystallization was carried out with a laboratory forced circulation crystallizer consisting of a vertical cylindrical vessel or vapor head with volume of about 2 L, circulation pump, heater, circulating oil bath, condenser, and a vacuum pump with pressure control.

Crystal slurry was extracted from the crystallizer once a desired amount of solution was fed, and the desired solids concentration achieved. Samples were dewatered and washed with a laboratory centrifuge. Most of the filtrates (mother liquor) from the centrifuge were fed back to the crystallizer and some were recycled upstream in the pilot process. Crystal masses were weighed.

Based on lithium hydroxide content, the moisture content in the first-stage $\text{LiOH}\cdot\text{H}_2\text{O}$ samples was roughly 2% to 6%. Main impurities in the samples included aluminum, sodium, potassium and silicon. Most other impurities were below the detection limit.

10.16 MOTHER LIQUOR CARBONATION

Mother liquor carbonation was undertaken as a batch test in a heated stainless steel reactor equipped with impeller, temperature measurement and carbon dioxide gas feed to the slurry. Based on the analysis results, the carbonation was successful with solution lithium concentration reduced to approximately 2 g/L (i.e., lithium carbonate solubility). The most significant impurities in the carbonation solids were sodium and aluminum. The filter cake was not washed as the aim was to recycle the solids to soda leaching.

10.17 SECOND-STAGE LITHIUM HYDROXIDE CRYSTALLIZATION

Second-stage lithium hydroxide crystallization was carried out in batches after continuous pilot plant operation. Crystallization equipment consisted of a vacuum pump, a heating bath, a distillation column and feed solution and distillate bottles.

Feed solution was prepared by dissolving the crude crystals in deionized water to approximately 20 g/L lithium concentration. Crystallization was carried out by evaporating water from the feed solution with a vacuum distiller. After crystallization, the slurry was filtered, and crystals were washed on the lab centrifuge.

The second stage crystallization samples showed aluminum <10 ppm, calcium <10 ppm, sodium <20 ppm, potassium <10 ppm and silicon <40 ppm. All other metallic impurities were below detection limits. Results showed carbon dioxide concentrations below 0.20%.

Based on the impurity concentrations, it is expected that when corrected for moisture that the pilot plant samples would be equal to or greater than 56.5% LiOH.

10.18 OPINION OF THE QUALIFIED PERSON

The test samples used to evaluate the process technologies for producing a spodumene concentrate were considered adequate to represent the first 10 years of the LOM, and considered a range of host rock dilution which exceeded the mine plan average, for the variability bench testwork undertaken.

The pilot test work sample was considered to be less representative and may only align to the early years of operation, given these samples came from near surface pegmatite outcrops, which though they reflect similar mineralogy, may not fully reflect the same characteristics at depth, when pegmatite ore zones narrow or have more host rock contact zones than that reflected in the resource model. This material was used predominantly to produce feed stock for the hydromet testwork and does not impact the concentrator basis of design.

The recovery of Li from the ROM ore was undertaken through what would be considered a conventional hybrid concentrator process consisting of DMS and flotation technologies. Both technologies are considered conventional and have significant information in the public domain to support a design basis. The actual test program was performed at a reputable 3rd party facility (SGS) who are ISO certified, and have significant years of experience in testing similar materials. Their procedures are well established and shown to be reproducible across comparable samples.

The data generated for lithium conversion using the proprietary MO technology aligns with other public domain information for conversion of lithium contained in spodumene to lithium hydroxide. The test procedures and

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methodologies applied across the unit operations are consistent with other hydrometallurgical test programs, that would be undertaken for leaching lithium and then converting through to a hydroxide form. The Pilot testing of the bulk concentrate as noted may not fully reflect the results that may be achieved across the LOM ores as samples were sourced from near surface material. There was limited work undertaken on variability samples, applied to the MO conversion patent test program, so carries the associated risks.

11 MINERAL RESOURCE ESTIMATES

11.1 ASSUMPTIONS, PARAMETERS AND METHODS

11.1.1 Geological Modelling

MGG Qualified Person Leon McGarry created a geologic model to define the lithium and by-product Mineral Resources for the Project. Geological modeling was undertaken by MGG using Micromine™ geological modelling software version 15.08. Mineral Resources are estimated for the Core, Central and Huffstetler Properties. Mineral Reserves have only been estimated for the Core Property. Mineral Resources inclusive of Mineral Reserves are disclosed in section 11.5.1. Mineral resources exclusive of Mineral Reserves are stated in Section 11.5.2.

Lithological and structural features were defined based upon geological knowledge of the deposit derived from drill core logs and geological observations on surface. The following features were wireframed:

Spodumene Dikes

At the Carolina Lithium project, lithium mineralization is present within spodumene-bearing pegmatite dikes which are hosted in altered amphibolite and metasediments. The lithium bearing mineral holmquistite occurs as a metasomatic replacement alteration that locally occurs within the host rocks adjacent to the mineralized pegmatites. Lithium cannot be economically recovered from holmquistite, and intervals of wall rock are excluded from the model where possible. Resource modeling is based on logged spodumene pegmatite lithology (coded “SBPEG” or “SPEG” in Piedmont logging), not Li₂O mineralization grade alone.

In discreet areas of limited extent, spodumene is altered with clay, muscovite, and feldspar replacement of varying intensity. A nominal low-grade limit of 0.25% Li₂O for pegmatite interpretation was developed to approximate the boundary between less and more intensely altered pegmatite seen in the histogram of Li₂O grades for spodumene bearing pegmatite samples (Figure 11-1). Pegmatite intervals below 0.25% Li₂O were reviewed on a case-by-case basis. Where low-grade intervals occur at the periphery of the deposit, they are excluded from the mineralization model.

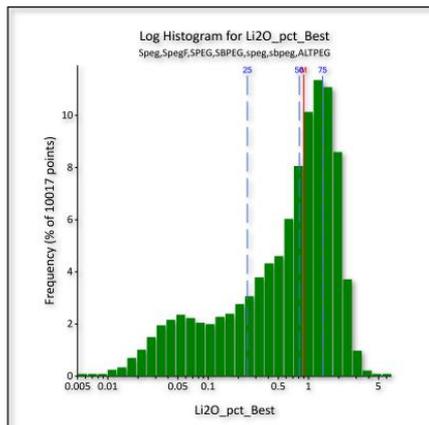


Figure 11-1 - Li₂O % Grades in Spodumene-bearing Pegmatites

Pegmatite orientations are interpreted to be controlled by their emplacement within hydro-fractures propagated along preferential structural pathways within the amphibolite and metasedimentary facies host rocks. Pegmatites are classified as either steep dikes, moderately dipping inclined sheets, or shallow dipping sills.

At the Core and Central properties, dikes and inclined sheets strike northeast and dip to the southeast at between 40° and 90°. At the Core and Huffstetler Properties, numerous flatter pegmatite sheets dip at between 0° and 45° in directions ranging from the north-northeast to south-southeast, and less frequently to the northwest as at the Huffstetler property.

String polygons are interpreted on sections spaced at 40 m in well drilled areas, with section spacings of up to 80 m in sparsely drilled areas. Each cross section was displayed with drillhole traces color-coded according to lithology code and with Li₂O values.

The following techniques were employed whilst interpreting the mineralization:

- Each cross section was displayed on screen with a clipping window equal to a half distance from the adjacent sections;
- Polygon nodes were snapped to drillhole intervals of spodumene pegmatite. Additional nodes were inserted to strings and snapped to regular 40 mRL intervals to aid wireframe modeling and modeling tie lines in plan view;
- Entire intervals of spodumene pegmatite were typically selected for modeling, regardless of the presence of low-grade material associated with partial alteration. Occasionally interstitial waste of up to 2 m may be included for the sake of continuity. However, if there is a gap of more than 2 m, or the interval is likely to be a separate feature, it was not included in the modeled interval. These rules were applied on a case-by-case basis;

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- No minimum thickness criteria are used for modeling, but a pegmatite must be present in at least two drillholes and on at least two sections;
- If a mineralized envelope did not extend to the adjacent drill hole section, it was projected halfway to the next section and terminated. The general direction and dip of the envelopes was maintained, although the dike thickness was reduced from the last known intersection;
- Polygon interpretations are extended a typical distance of 40 m to 60 m from the nearest SPEG interval, dependent on the local continuity of dikes.

The interpreted strings were used to generate three-dimensional (3D) solid wireframes for the mineralized envelopes. Every section was displayed on-screen along with the closest interpreted section. If the corresponding envelope did not appear on the next cross section, the former was projected halfway to the next section, where it was terminated.

- On the Core Property, 76 spodumene-bearing pegmatite dike portions are modeled that are considered sufficient for use as MRE domains;
- On the Central Property, 11 spodumene-bearing pegmatite dike portions are modeled that are considered sufficient for use as MRE domains;
- On the Huffstetler Property, six spodumene-bearing pegmatite dike portions are modeled that are considered sufficient for use as MRE domains.

Topography

Modelling utilized a topographic digital terrain model (DTM) that incorporates LiDAR and photogrammetry data with high accuracy RTN-GPS survey control. The LiDAR data has an accuracy class of +/- 0.1 m. Relative to the topography, surveyed collar coordinates have an average difference of 2 m ranging from -6 m to 26 m. Obvious differences are noted where tree cover and vegetation is dense often associated with gullies and ridges. To account for these differences drill collars are projected on to the DTM surface.

Weathering

At the Carolina Lithium Project properties, weathering profiles were modeled for the following features:

- Base of overburden surface, extending to a maximum depth of approximately 12 m with an average depth of approximately 2 m;
- Base of saprolite surface, extending to a maximum depth of approximately 48 m with an average depth of approximately 15 m.

For each feature, 3D points representing the base overburden interval and saprolite depth are extracted from each drillhole log. Points are filtered to remove inconsistent and possibly mis-logged intervals. Depths are contoured at a 10 m² resolution. Overburden and saprolite wireframes are generated from gridded overburden depths offset from the topography surface.

Example cross sections through the base of overburden model and base of saprolite model are shown in Figure 6-5 to Figure 6-7.

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11.1.2 Statistical and Geostatistical Analysis

Before undertaking the resource estimate, statistical assessment of the data was completed to understand how the estimate should be accomplished. Exploration sample data were statistically reviewed, and variograms were calculated to determine spatial continuity for Li₂O grades and quartz, feldspar, and mica grades. Statistical analysis was carried out using Snowden Supervisor™ software version 8.6.

Data Coding and Composite Length Selection

Samples were selected for individual mineralized envelopes and flagged for each mineralization zone and geological domain. A summary of the codes used to distinguish the data during geostatistical analysis and estimation is shown below.

Wireframes are first classified by deposit, or Core deposit corridor from west to east:

Core		
	Ballard	= 1000
	B Corridor	= 2000
	G Corridor	= 3000
	Star	= 4000
	F Corridor	= 5000
Central		= 6000
Huffstetler		= 7000

Wireframes receive an additional code if they have a shallow, steep or moderate dip:

Flat	=	100
Steep	=	200
Moderate	=	300

Domains receive an additional qualifier to distinguish between multiple stacked dikes (10, 20, 30, etc.). Using this system, alpha numeric codes that uniquely describe all dikes and dike segments are generated.

Compositing is undertaken whereby the maximum composite length is defined by the dominant sample length (1 m) and the minimum composite length is set to 0.3 m.

Unsamped Intervals

At the Core Property there are eight intervals present within the spodumene pegmatite model that were not sampled and do not have an assayed lithium grade. These intervals include zones of poor recovery and very thin dikes that were not sampled. At the Central Property there are two unsampled intervals within the spodumene pegmatite model that do not have an assayed lithium grade. These intervals include a zone of poor recovery and an unsampled waste parting. Unsamped intervals are assigned a null grade rather than a zero grade and are ignored during resource estimation. There are no unsampled intervals at the Huffstetler deposit.

There are several intervals that do not have XRF analyses or calculated normative mineralogy values derived from them. Historical holes completed prior to drillhole 17-BD-47 did not have material available for XRF analysis and

normative mineralogy could not be calculated for those samples. Given that intervals from these holes will contain by-product minerals, albeit at unknown grades, they are assigned a null grade rather than a zero grade and are ignored during resource estimation.

11.1.3 Statistical Analysis

Samples were assigned to the specific spodumene-bearing pegmatite domains. Samples that fell outside of these domains were excluded from further analysis.

Univariate statistical assessments of composited Li₂O grade data and normative mineralogy calculations were undertaken. Histograms and summary statistics for composited Li₂O, quartz, albite, potassium-feldspar (*K-spar*) and muscovite values for each property are presented below. Results of the statistical analysis indicate that a single estimation approach is appropriate for all properties.

Li₂O

At all properties, Li₂O grades have broadly comparable asymmetric distributions with moderate positive skew (Table 11-1). At Core and Central, most samples are above 1% Li₂O with median grades of 1.02% and 1.33%, respectively. Li₂O grades are slightly lower at the Huffstetler property which has a median grade of 0.71% Li₂O. At all properties Li₂O analyses have a low coefficient of variation (CV - i.e., the ratio of the standard deviation to the mean) ranging from 0.50 at Central and 0.73 at Huffstetler. Within modeled mineral resource wireframes, Li₂O grade distributions are comparable for fresh and weathered rock. Weathered pegmatite samples have slightly lower grade on average.

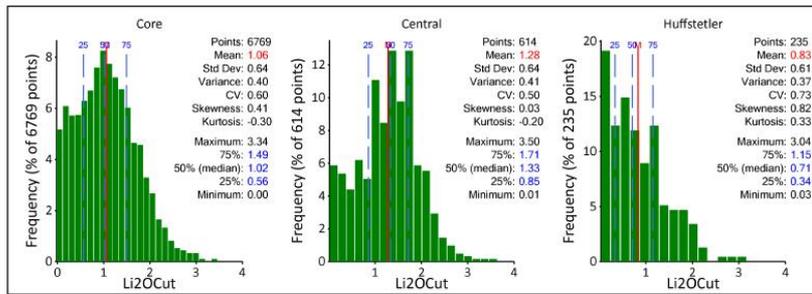


Table 11-1 - Li₂O Histograms and Statistics by Property Area

Filters	Area	Count	Min.	Median	Max.	Average	Std. Dev.	CV
Li ₂ O %	Core	6769.0	0.00	1.02	3.34	1.06	0.64	0.60
	Central	614.0	0.01	1.33	4.10	1.28	0.65	0.50
	Huffstetler	235.0	0.03	0.71	3.04	0.83	0.61	0.73

Quartz

At all properties quartz has a tight symmetrical distribution with very similar average grades ranging from 28.83% at Huffstetler to 29.59% at Core (Table 11-2). All properties have low CVs less than 0.2. Low quartz grade variability is reflected by an interquartile range of 6% or less. There is no significant difference between quartz grade distributions or average grades for fresh and weathered rock.

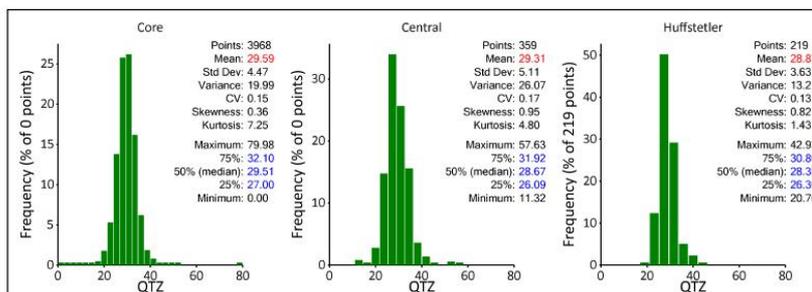
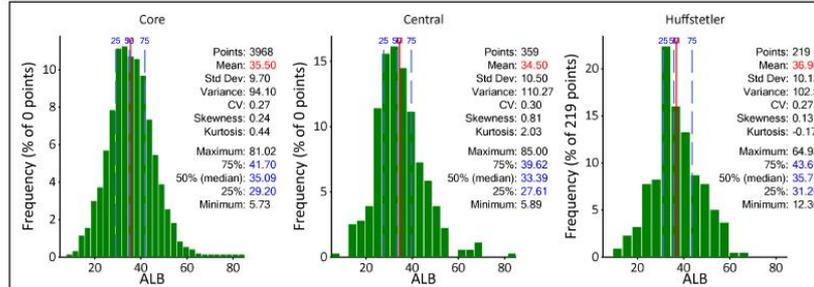


Table 11-2 - Quartz Histograms and Statistics by Property Area

Filters	Area	Count	Min.	Median	Max.	Average	Std. Dev.	CV
Quartz %	Core	3,968.0	0.00	29.51	79.98	29.59	4.47	0.15
	Central	359.0	11.32	28.67	57.63	29.31	5.11	0.17
	Huffstetler	219.0	20.76	28.38	42.93	28.83	3.63	0.13

Albite

At all properties Albite grades have a symmetrical distribution (Table 11-3) and have very similar average grades ranging from 33.39% at Central (where Li grades are highest) to 36.90% at Huffstetler (where Li grades are lowest). All properties have a low CV of 0.3 or less. The average calculated grades show very good agreement with the average logged mineralogy grades. There is no significant difference between albite grade distributions or average grades for fresh and weathered rock.



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Table 11-3 - Albite histograms and statistics by property area

Filters	Area	Count	Minimum	Median	Maximum	Average	Std. Dev.	CV
Albite %	Core	3,968.0	5.73	35.09	81.02	35.50	9.70	0.27
	Central	359.0	5.89	33.39	85.00	34.50	10.50	0.30
	Huffstetler	219.0	12.36	35.77	64.98	36.90	10.13	0.27

K-Spar

At Core and Central properties, K-spar grades have asymmetric distributions with a moderate to strong positive skew (Table 11-4). At Core and Central, most grades (75%) are below 13% with mean grade of 9.54% and a CV of approximately 0.62. At Huffstetler, the distribution is less skewed with a higher average K-Spar grade of 12.16% and lower CV of 0.39. The average calculated grade is comparable to the average logged mineralogy grade of 12% K-spar. Weathered pegmatites have lower K-spar values across all grade ranges.

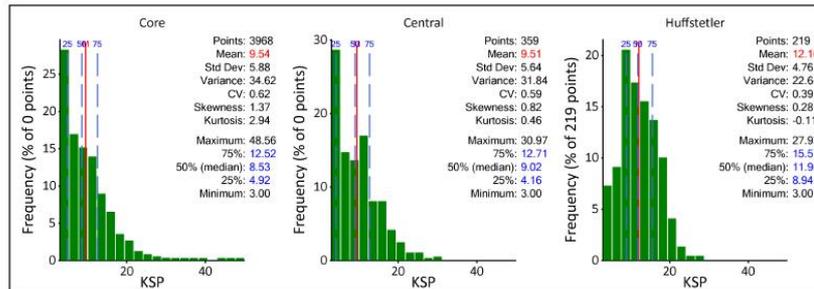


Table 11-4 - K-spar Histograms and Statistics by Property Area

Filters	Area	Count	Min.	Median	Max.	Average	Std. Dev.	CV
K-spar %	Core	3,968.0	3.00	8.53	48.56	9.54	5.88	0.62
	Central	359.0	3.00	9.02	30.97	9.51	5.64	0.59
	Huffstetler	219.0	3.00	11.90	27.93	12.16	4.76	0.39

Muscovite

At all properties Muscovite grades have a positively skewed distribution (Table 11-5) with a long tail of high grades. At all properties, 90% percent of samples have a muscovite grade of 7% or less, while the remaining 10% have grades ranging up to 19.41% at Core and 11.66% at Huffstetler. The Core property has an average grade of 4.29% and a CV of 0.46. Central and Huffstetler have an average muscovite grade of 3.3%, lower than at Core. The average calculated grades show very good agreement with the average logged mineralogy grades. Pegmatites above the base of saprolite surface have higher muscovite values across all grade ranges. This is in accordance with observed weathering of K-spar to muscovite.

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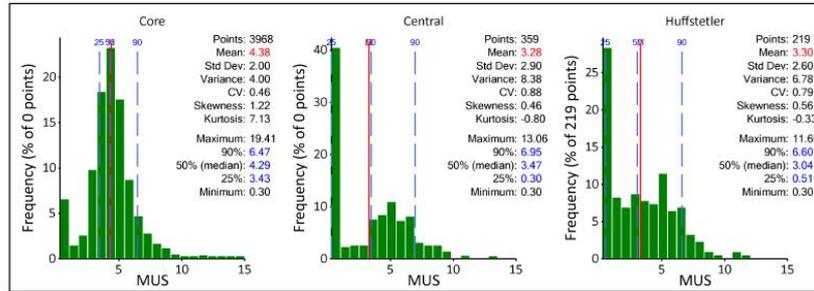


Table 11-5 - Muscovite histograms and statistics by property area

Filters	Area	Count	Min.	Median	Max.	Average	Std. Dev.	CV
Muscovite %	Core	3,968.0	0.30	4.29	19.41	4.38	2.00	0.46
	Central	359.0	0.30	3.47	13.06	3.28	2.90	0.88
	Huffstetler	219.0	0.30	3.04	11.66	3.30	2.60	0.79

11.1.4 Treatment of Outliers

A review of grade outliers was undertaken to ensure that extreme grades are treated appropriately during grade interpolation. Although extreme grade outliers within the grade populations of variables are real, they are potentially not representative of the volume they inform during estimation. If these values are not cut, they have the potential to result in significant grade over-estimation on a local basis.

Lithium

At Core a review of composite statistics did not present a compelling case for the application of top cuts. The CV of all domained composites is close to one (see statistics and histograms in Table 11-1). For individual domains, CVs are less than one. An inflection at the 99.8 percentile grade of 2.8% Li₂O is seen in the probability plot for composite Li₂O grades. This value was used to identify “extreme grades” samples that are compared to surrounding sample grades. The majority of extreme grades are encountered in high-grade portions of the deposit, and they are well constrained by surrounding drillholes. In domains 1220, 3311, 4210, 5210 and 5220 twelve extreme grades ranging from 3.02% to 4.30% Li₂O were unusually high relative to surrounding samples and were capped at 3.0% Li₂O.

At Central, a sample with an extreme grade of 4.10% Li₂O was identified in hole 19-CT-014 within domain 6220 which was particularly high relative to surrounding samples and was capped at 3.5% Li₂O.

At Huffstetler, no extreme grade samples were identified, and none were capped.

By-Product Minerals

In general, domained mineral grade data show distributions that are not heavily skewed and do not contain extreme values. The CVs for these grade data are less than one. On this basis, it is not necessary to cap by-product mineral grades.

11.1.5 Geostatistical Analysis

Modeled spodumene-bearing pegmatites were grouped into orientation domains. For each orientation domain a representative pegmatite, or set of pegmatites, with a sufficient number of samples was selected to generate meaningful lithium grade variation models that could support block model estimation.

Lithium

Composite Li_2O values underwent a normal score transform prior to being assessed for anisotropy, or directional dependence. Maps of Li_2O value continuity were used to investigate the strike, dip, and pitch direction axis of spodumene mineralization trends within the domains. For all domains, semi-variogram charts for Li_2O were modeled using two spherical functions. Normal score variograms were back-transformed to give the semi-variogram parameters used for estimation.

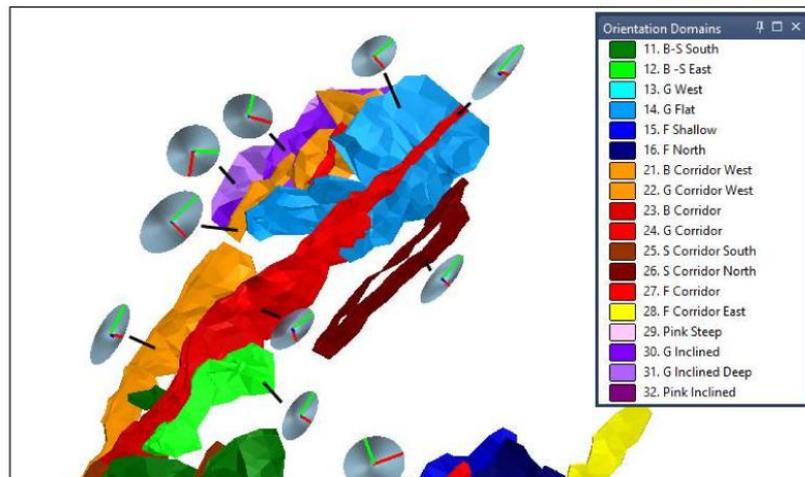
Core Property: Fourteen (14) orientation domains were identified, wireframes colored by orientation domain are shown in Figure 11-2 with corresponding mineralization trends. Along strike and down dip Li_2O grade continuity typically ranges from 80 m to 110 m with shorter ranges in more thin, variable or discontinuous domains. Across strike and down hole variograms indicate short grade continuity across pegmatites with ranges typically less than 15 m. Nugget effect (i.e., short range grade variability) at the Core deposit is low with domain nugget values averaging 25%, indicative of the Li_2O low-grade variability.

Central Property: Three (3) orientation domains were identified. Wireframes colored by orientation domain are shown in Figure 11-3 with corresponding mineralization trends. Central mineralization trends are broadly comparable to those at Core.

Huffstetler Property: Two (2) orientation domains were identified, and wireframes colored by orientation domain are shown in Figure 11-3 with corresponding mineralization trends. Huffstetler mineralization trends are broadly comparable to those at Core.

By-Product Minerals

Semi-variogram models for Li_2O are appropriate for modeling of by-product minerals.



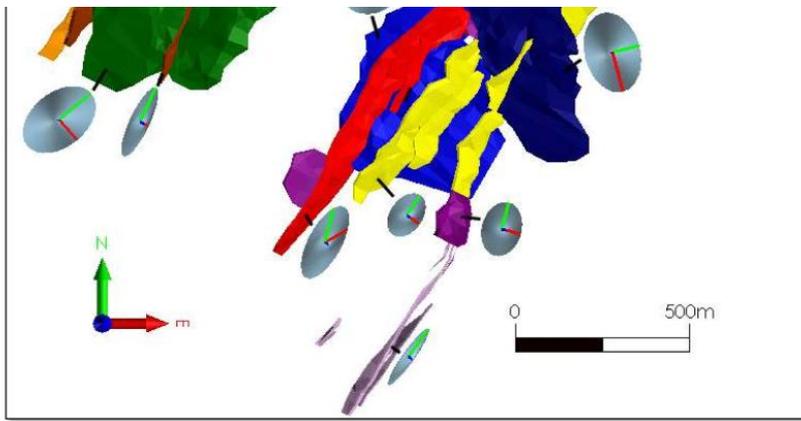


Figure 11-2 - Piedmont Orientation Domains with Associated Search Ellipse for Core Resource

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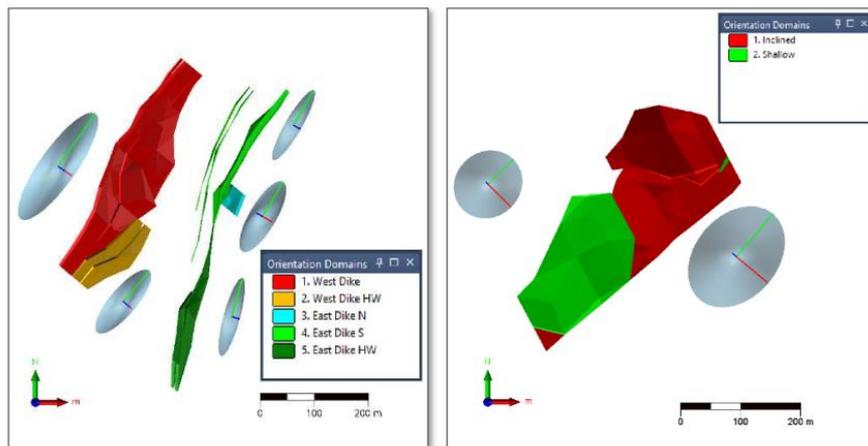


Figure 11-3 - Domains with Search Ellipse for Central Resource (left) and Huffstetler Resource (right).

11.1.6 Density

In situ dry bulk densities for the Core, Central and Huffstetler Mineral Resource were assigned on a lithological basis using representative averages.

Methodology

Dry bulk density measurements for Phase 2 drilling were made on half-core fragments sent for geochemical analysis at SGS using the immersion method (code GPHY04V). One host rock and one spodumene-bearing pegmatite measurement was taken for each drillhole.

Saturated and dry bulk densities for Phase 3, Phase 4 and Phase 5 drill programs were collected by Piedmont geologists using a triple beam scale and the immersion method. Core fragments are typically 6 cm to 10 cm in length and 90 cm³ to 120 cm³ in volume. Porosity was considered and porous samples were coated with cling film prior to immersion. During Phase 3 and Phase 4 measurements were primarily collected from the saprolite zone and amphibolite and metasediment host rocks. During Phase 5 measurements were made on all lithologies at regular 10 m intervals with closer spacings in spodumene pegmatites and weathered zones.

The two methods of density measurement are considered appropriate and determinations from each appear reasonable and can be grouped together for subsequent analysis.

Analysis and Results

Sampled intervals were tagged as being above or below the saprolite surface. Density estimates are generated for spodumene-bearing dike, waste, and overburden lithologies within fresh and saprolite weathering domains.

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The number of density determinations for individual pegmatite domains is variable, but there is a sufficient number to estimate a representative density for spodumene-bearing dikes. This approach is also used for the other material units in the block model listed above. At all properties, units have low bulk density standard deviations (Table 11-6) which supports the use of representative averages for each material unit.

11.1.6.1.1 Core Property

There is a broad spread of density determinations throughout the Core deposit. Average bulk densities for spodumene bearing pegmatite and waste rock were derived from 3,434 determinations on selected drill core from the Property made by Piedmont geologists in the field and 139 by SGS Labs. Using an updated base of saprolite model generated in August 2021, simple averages presented in Table 11-6 were generated.

Five density determinations made on overburden waste rock material returned spurious values ranging from 0.75 t/m³ to 0.79 t/m³ and 2.85 t/m³ to 5 t/m³. Four density determinations made on saprolite waste rock material returned spurious values ranging from 3.36 t/m³ to 9.52 t/m³. Nine determinations made on saprolite returned spurious low dry bulk density values ranging from 0.21 t/m³ to 0.79 t/m³. Two density determinations made on fresh rock had spurious low-density values of 0.99 t/m³ and 1.22 t/m³. Four had erroneous high values ranging from 8.27 t/m³ to 58.61 t/m³. These results were not used to calculate rock density.

11.1.6.1.2 Central Property

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. For the Central Property, simple averages presented in Table 11-6 were generated.

11.1.6.1.3 Huffstetler Property

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. Densities of weathered spodumene-bearing pegmatite and waste rock are taken from available data at Core property as of February 15, 2021. For the Huffstetler Property, simple averages presented in Table 11-6 were generated.

Table 11-6: MRE Dry Bulk Density Values (t/m³)

Material	Count	Minimum	Maximum	Average	Standard deviation	
Core						
Overburden	165	0.81	2.44	1.31	0.25	
Saprolite	Waste	730	0.81	3.35	1.41	0.46
	SPEG	60	1.17	2.71	1.90	0.53
Fresh	Waste	1876	1.05	7.14	2.88	0.18
	SPEG	436	2.15	3.03	2.70	0.09

Material	Count	Minimum	Maximum	Average	Standard deviation	
Central						
Overburden	9	0.92	1.59	1.23	0.20	
Saprolite	Waste	37	0.84	2.19	1.36	0.30
	SPEG	10	1.22	2.52	1.86	0.45
Fresh	Waste	131	1.68	7.91	2.95	0.50
	SPEG	29	2.55	3.73	2.85	0.24
Huffstetler						
Overburden*	141	0.75	2.85	1.30	0.27	
Saprolite	Waste*	602	0.66	3.16	1.36	0.43
	SPEG*	52	1.2	2.93	1.86	0.52
Fresh	Waste	41	2.53	3.02	2.84	0.13
	SPEG	14	2.64	2.81	2.70	0.06

*Includes data from Core as of 15th February 2021.

11.1.7 Block Modeling

Block Model Construction

Block models created to encompass the full extent of the Core, Central and Huffstetler Properties were constrained by the interpreted pegmatite wireframe model and by DTMs representing weathering and topography boundary surfaces. Block model parameters for each property are shown in Table 11-7.

Block models were rotated to align with pegmatite deposit trends at an azimuth orientation of 35° for the Core deposit and 40° for the Central and Huffstetler deposits. To honor the variable orientation and thinness of the pegmatite domains, parent cell sizes of 6 m (E) by 12 m to 18 m (N) by 6 m to 18 m (Z) were selected. Sub-celling to a minimum block size of 4 m to 6 m along strike, 2 m across strike and 1 m elevation was selected to maintain an appropriate model resolution.

Table 11-7: Block Model Parameters

Deposit	Coordinate	Origin (min)	Range (m)	Parent cell (m)	Sub-cell (m)	No. of sub cells
Core	X	472,503.344	1,854	6	2	284
	Y	3,915,510.429	2,352	12	4	167
	Z	23.5	252	6	1	43
Central	X	472,756.08	550	6	2	275
	Y	3,913,338.51	800	18	6	133
	Z	-29	330	18	1	330

Deposit	Coordinate	Origin (min)	Range (m)	Parent cell (m)	Sub-cell (m)	No. of sub cells
Huffstetler	X	475,594.824	546	6	2	160
	Y	3917221.438	684	12	4	40
	Z	50.50	202	6	1	15

Grade Interpolation

Pegmatite domain shell contacts are interpreted as hard boundaries for grade interpolation, such that Li₂O, quartz, feldspar, and muscovite grades in one domain cannot inform blocks in another domain.

The Kriging interpolation method uses measured mineralization trends to weight composite assay values when estimating block grades. The Ordinary Kriging (OK) estimation process also incorporates a locally varying average sample grade and is therefore an appropriate method for estimating block grades at the Piedmont deposits where mineralization has a locally variable nature.

For validation purposes, an IDW interpolation was also undertaken. The IDW technique weights sample grades proportionally to the inverse of their distance from the block raised by a power of three (IDW^3).

For the Core, Central and Huffstetler Property deposit models, blocks were estimated in multiple passes with at

For the Core, Central and non-steep Property deposit models, blocks were estimated in multiple passes with at least three drillholes informing the block, minimum of 10 samples, maximum of 12 samples and a maximum of four samples per drillhole. A maximum of four samples per hole and a minimum of eight resulted in at least two drillholes being used. Search parameters are presented in Table 11-8.

Table 11-8: Search parameters

	Pass 1	Pass 2	Pass 3	Pass 4*
Search volume multiple	× 1	× 2	× 4	× 6
Minimum samples	8	8	8	4
Maximum samples	16	16	16	16
Maximum per hole	4	4	4	3
Discretization	3 x 3 x 3			
Boundaries	Hard			
Ellipse Segments	1			

*Applied to a small number of blocks.

Up to four search passes were used if block was not estimated in the first pass. The first search distance was equal to approximately 50% of the variogram range; subsequent searches were undertaken using two and four times this distance. A small number of blocks did not receive an estimate in passes one to three. For these domains, an additional “filler” search run was used that allowed a minimum of four samples and a maximum of three samples per hole.

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For a given block, the closest composite sample grades are the best indicators of the likely block grade. De-clustering via an octant search method was not necessary. The estimation performed using a 3 × 3 × 3 discretization of the parent block.

11.1.7.1.1 Lithium

The search ellipses detailed in Table 11-9 were used for both OK and IDW³ estimates.

11.1.7.1.2 By-Product Minerals

Grades for by-product minerals were estimated independently using OK in a univariate sense, using the same search ellipses and parameters utilized for the lithium resource. This was done with the goal of ensuring block grade proportions and grade correlations honor input samples, and that mineral grade estimates approach 100%.

Table 11-9: Search Ellipse Parameters

ORIENTATION DOMAIN	ORIENTATION			RANGE		
	Strike	Dip	Plunge	Major	Semi-major	Minor
Core Property						
11. B-S South	50.0	-5.0	9.0	120.0	80.0	15.0
12. B -S East	30.0	0.0	15.0	80.0	40.0	15.0
13. G West	45.0	0.0	15.0	40.0	40.0	15.0
14. G Flat	50.0	0.0	15.0	75.0	50.0	15.0
15. F Deep	-20.0	-4.0	3.0	80.0	90.0	15.0
16. F Shallow	75.0	0.0	10.0	80.0	120.0	15.0
21. B Corridor West	26.0	-12.0	54.0	100.0	60.0	15.0
22. G Corridor West	45.0	0.0	35.0	110.0	80.0	15.0
23. B Corridor	53.2	15.2	48.2	80.0	60.0	15.0
24. G Corridor	39.7	-17.2	58.4	110.0	50.0	15.0
25. S Corridor South	25.0	0.0	65.0	110.0	60.0	15.0
26. S Corridor North	40.0	0.0	70.0	90.0	80.0	15.0
27. F Corridor	14.3	-31.8	47.6	120.0	110.0	15.0
28. F Corridor East	35.0	0.0	65.0	70.0	90.0	15.0
29. Pink Steep	35.0	0.0	85.0	100.0	100.0	15.0
30. G Moderate	92.2	18.9	16.7	80.0	80.0	15.0
31. G Moderate East	50.0	0.0	25.0	65.0	80.0	15.0
32. Pink Steep	15.0	0.0	45.0	80.0	80.0	15.0
Central Property						
1. West Dike	35	0	70	120	90	15
2. West Dike HW	40	0	70	75	60	15
3. East Dike N	30	0	90	75	60	15

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ORIENTATION DOMAIN	ORIENTATION			RANGE		
	Strike	Dip	Plunge	Major	Semi-major	Minor
4. East Dike S	15	0	90	75	60	15
5. East Dike HW	30	0	-70	75	60	15
Huffstetler						
1. Inclined	40.0	0.0	-40.0	95	90	10
2. Shallow	45.0	0.0	-25.0	60	60	10

11.2 BLOCK MODEL VALIDATION

Validation of the Core Property and Central Property block model grade estimates was completed by:

- Visual checks on screen in cross-section and plan view to ensure that block model grades honor the grade of sample composites;
- Statistical comparison of composite and block grades;
- Generation of swath plots to compare input and output grades in a semi-local sense, by easting, northing, and elevation.

11.2.1 Visual Validation

For all properties, block grades correlate very well with input sample grades. The distribution and tenor of grades in the composites are well honored by the block model and are appropriate considering known levels of grade continuity and the variogram.

- Core: Poorly informed deposit areas with widely spaced samples are more smoothed which is expected. Example cross-section views of block models colored by Li_2O are shown in Figure 6-5 and Figure 6-6;
- Central: As in the Core Property block model, poorly informed deposit areas with widely spaced samples are more smoothed. An example cross-section views of block models colored by Li_2O are shown in Figure 6-7;
- Huffstetler: As in the Core Property block model, poorly informed deposit areas with widely spaced samples are more smoothed. An example cross-section views of block models colored by Li_2O are shown in Figure 6-8.

11.2.2 Comparison of Means

A comparison of the average Li_2O , quartz, albite, K-spar and muscovite grade of input composites and estimated block grades was undertaken for each resource estimate domain. For major domains that account for the majority of the resource model volumes at each property, a further comparison was made between de-clustered composite Li_2O grades and estimated block grades.

Core

The mean input composite grade and both the OK and IDW block model grades are comparable. The volume weighted average of Li_2O grades estimated by OK is equal to input samples. For 72 of 76 domains, differences are

within $\pm 10\%$ for Li_2O grade estimates. Larger differences are seen for domains with greater grade variance, and/or fewer samples. Comparable results are seen for by-product minerals.

For 14 major domains, accounting for 55% of the Core resource model volume, both the OK and IDW method are within $\pm 3\%$ of de-clustered input composite mean grades and have an average difference of 0.72% and 2.68% respectively (Table 11-10).

Table 11-10: Comparison of Means for Major Core Property MRE Domains

Domain	Sample Count	Li_2O Mean	Declus Mean	Block Count	Li_2O OK	Diff. OK	Li_2O ID ³	Diff. ID ³
B Corridor South (1220)	125	1.36	1.40	6,901	1.44	2.56	1.44	2.74
B Corridor (2210)	298	0.92	0.95	30,769	0.95	-0.32	0.97	1.87
B Corridor (2220)	512	1.11	1.10	38,394	1.13	3.12	1.13	2.78
B Corridor (2221)	200	0.82	0.82	10,951	0.84	2.96	0.85	3.47
G Corridor (3230)	443	1.16	1.14	32,096	1.12	-1.43	1.13	-0.46
G Inclined (3321)	111	0.92	0.90	16,641	0.93	3.61	0.94	4.62
G Flat (3321)	251	1.25	1.25	20,211	1.24	-0.71	1.27	1.52
S Corridor (4110)	225	1.25	1.23	12,386	1.19	-3.53	1.24	0.80
F Flat (5110)	235	1.08	1.09	13,289	1.13	3.73	1.18	7.52
F Flat (5120)	372	1.20	1.14	19,341	1.15	0.97	1.19	4.19
F Corridor (5210)	447	1.13	1.14	33,657	1.12	-1.89	1.14	-0.35
F Corridor (5220)	208	1.08	1.10	14,153	1.13	2.84	1.13	2.22
F Corridor (5230)	179	0.89	0.87	17,135	0.89	1.59	0.91	4.39
F Corridor (5250)	172	1.33	1.24	17,670	1.25	0.99	1.35	9.05
All						0.72%		2.68%

Central

The volume weighted average of Li_2O grades estimated by OK are 5% lower than input samples. For 8 of 10 domains, differences are within $\pm 10\%$ for Li_2O grade estimates. Larger differences are seen for domains with greater grade variance, and/or fewer samples. Comparable results are seen for by-product minerals. For two major domains, accounting for 70% of the Central resource model volume, both the OK and IDW method differences are within $\pm 5\%$ of de-clustered input composite mean grades and have an average difference of 0.45% and 2.48% respectively (Table 11-11).

Table 11-11: Comparison of means for Central Property MRE domains

Domain	Sample Count	Li_2O Mean	Declus Mean	Block Count	Li_2O OK	Diff. OK	Li_2O ID ³	Diff. ID ³
West Dike (6210)	173	1.21	1.17	55,650	1.17	-0.18	1.20	3.05
East Dike (6220)	230	1.47	1.42	29,016	1.44	1.66	1.45	2.54
All						0.45%		2.48%

Huffstetler

The volume-weighted average of Li_2O grades estimated by OK are 5% higher than input samples. For 6 of 8 domains, differences are within $\pm 10\%$ for Li_2O grade estimates. For two major domains, accounting for 69% of the Huffstetler resource model volume, both the OK and IDW method differences are within $\pm 5\%$ of de-clustered input composite mean grades and have an average difference of 3.51% and 0.62% respectively.

Table 11-12: Comparison of means for Huffstetler Property MRE domains

Domain	Sample Count	Li_2O Mean	Declus Mean	Block Count	Li_2O OK	Diff. OK	Li_2O ID ³	Diff. ID ³
--------	--------------	----------------------------	-------------	-------------	--------------------------	----------	---------------------------------------	-----------------------

Inclined (7310)	116	0.92	0.97	57,223	1.01	5.07	0.97	0.73
Shallow (7311)	41	0.65	0.58	21,254	0.57	-0.69	0.58	1.39
All						3.51%		0.62%

11.2.3 Swath Plots

Swath plots were generated for the for major domains that account for the majority of resources each property. Swath plots compare the grades of composites and grade estimates that fall within regular slices along strike and depth slices. Plots identify slices that contain high-grade samples and low-grade blocks, or vice versa, which might indicate a problem with the estimation technique.

For all domains, block grades estimated by OK and IDW³ have a smoother profile relative to input samples. Where there are more samples, good agreement is seen between the trends of input composites and block grades estimated by each technique. The OK profile is slightly smoother than IDW. Both models reflect drillhole data on a local basis.

Core

Swath plots were generated for the 14 major domains which compare the grades of composites and grade estimates that fall within 12 m northing slices and 4 m easting and elevation slices. Example swath plots for Li₂O in the B_S_20 domain are shown in Figure 11-4.

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Central

Swath plots were generated for the two major domains which compare the grades of composites and grade estimates that fall within 20 m northing slices and 5 m easting and elevation slices. The OK profile is slightly smoother than IDW. Both models reflect drillhole data on a local basis.

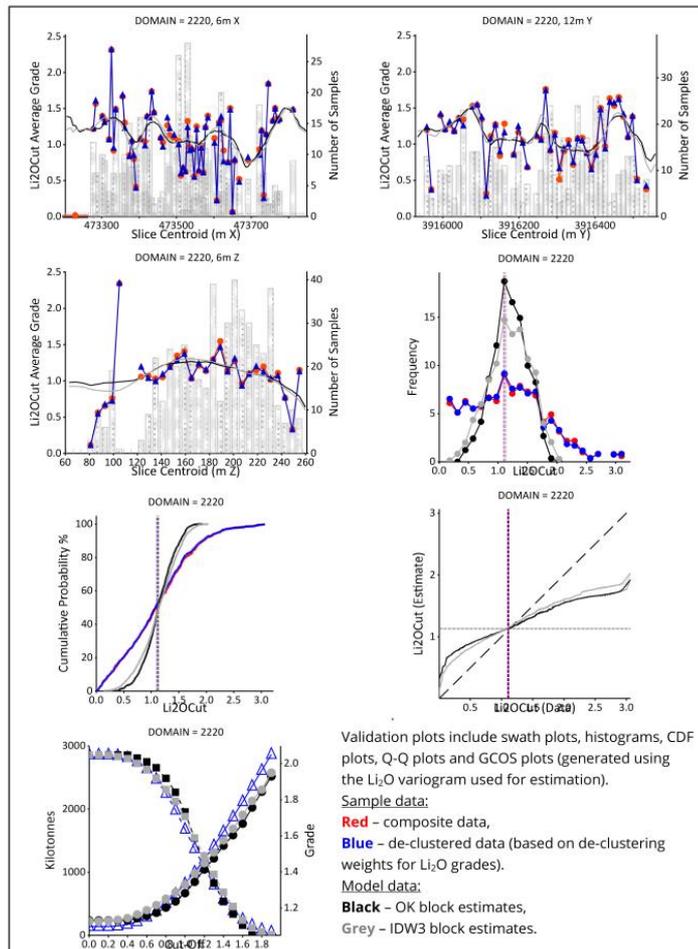


Figure 11-4 - Validation Plots for the B_S_20 Domain

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11.2.4 Correlation Coefficients

The correlation coefficient between modeled variables was compared with input data derived from lithium assays and normative calculations.

Both positive and negative correlations between variables are present in input composites and the block model. Although regularized weight percent grades are modeled independently in a univariate sense, the selected search parameters result in block model grade estimates that broadly honor mineral grade correlations in input composites.

Table 11-13: Comparison of correlation coefficients for Core assay and block data

	Li ₂ O comp	Li ₂ O blocks	QTZ comp	QTZ blocks	ALB comp	ALB blocks	KSP comp	KSP blocks	MUS comp	MUS blocks
Li ₂ O	1.00	1.00								
QTZ	0.15	0.04	1.00	1.00						
ALB	-0.56	-0.31	-0.46	-0.51	1.00	1.00				
KSP	-0.02	-0.12	-0.28	-0.24	-0.30	-0.37	1.00	1.00		
MUS	-0.22	-0.25	0.30	0.45	-0.18	-0.16	-0.27	-0.27	1.00	1.00

Table 11-14: Comparison of correlation coefficients for Central assay and block data

	Li ₂ O comp	Li ₂ O blocks	QTZ comp	QTZ blocks	ALB comp	ALB blocks	KSP comp	KSP blocks	MUS comp	MUS blocks
Li ₂ O	1.00	1.00								
QTZ	0.15	0.11	1.00	1.00						
ALB	-0.59	-0.46	-0.47	-0.45	1.00	1.00				
KSP	-0.06	-0.13	-0.31	-0.27	-0.32	-0.39	1.00	1.00		
MUS	-0.20	-0.25	0.32	0.38	-0.13	-0.11	-0.26	-0.28	1.00	1.00

Table 11-15: Comparison of correlation coefficients for Huffstetler assay and block data

	Li ₂ O COMP	Li ₂ O BLOCKS	QTZ COMP	QTZ BLOCKS	ALB COMP	ALB BLOCKS	KSP COMP	KSP BLOCKS	MUS COMP	MUS BLOCKS
Li ₂ O	1.00	1.00								
QTZ	-0.22	-0.27	1.00	1.00						
ALB	-0.63	-0.45	-0.39	-0.22	1.00	1.00				
KSP	0.24	0.27	-0.35	-0.55	-0.36	-0.40	1.00	1.00		
MUS	-0.43	-0.62	0.46	0.60	-0.04	0.16	-0.48	-0.57	1.00	1.00

11.3 CLASSIFICATION

The Mineral Resource has been classified in accordance with guidelines specified in the JORC Code and with definitions specified in SEC Regulation S-K 1300. The classification level is primarily based upon an assessment of 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. Significant sources of uncertainty presented in Table 11-16 are considered when classifying resources at the Property.

Table 11-16: Sources of Uncertainty

Uncertainty Source	Discussion
Drilling techniques, drill sample recovery.	Majority of drilling utilizes NQ or larger core diameters that provide representative sample volumes. High core recoveries provide confidence that core samples, and the assay values derived from them, are representative of the material drilled and suitable for inclusion in resource estimation studies.
Logging	Digital lithology files have sufficient information to enable interpretations of pegmatite continuity and orientation. Core logging practices and lithology codes are consistent across exploration phases.
Sampling techniques, assay quality	Comprehensive and documented sampling, security and QA/QC measures were employed for all Piedmont exploration drill programs accounting for 97% of the drill holes in the resource database. Examination of the QA/QC sample data indicates satisfactory performance of field sampling protocols and assay laboratories providing acceptable levels of precision and accuracy.
Location of data points	Reliable collar surveys are available for all drilling. Reliable downhole surveys are available for recent drilling. Survey data allow modeling of pegmatite intercepts with high degree of spatial accuracy.
Data processing and handling,	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. An extract of the Core database was validated for internal integrity via Micromine® validation functions.
Data spacing and distribution	Deposits are well understood based on surface pegmatite outcrops and extensive drilling at spacings sufficient to provide multiple points of observation for modeled geological features. Lithology domain and grade continuity are well established where drill density is greater than 40 m x 40 m; however, there remain portions of the Core, Central and Huffstetler Properties where sample density is insufficient to establish continuity beyond an Inferred level. On the Core Property: <ul style="list-style-type: none"> Thin, sub 2 m true thickness, dikes and inclined sheets throughout the B-G, S and F corridors. Dikes informed by widely spaced drilling at the north-western end of the B-G Corridor and S Corridor and the Pink Dike in the East Pit Extension area of the F Corridor. Inclined sheets and sills informed by widely spaced drilling at S Corridor south of Beaverdam Creek and eastern and northern parts of the upper sill at F corridor. On the Central Property: <ul style="list-style-type: none"> At the periphery of major dikes to the south and at depth, Thin, sub 2 m true thickness, dikes and inclined sheets throughout the Property. On the Huffstetler Property: <ul style="list-style-type: none"> The entire deposit is Inferred.
Geological Modelling	Geological models are underpinned by a good understanding of the deposit geology. Mineral resources are controlled by the presence of spodumene pegmatite, and the intensity of spodumene alteration to muscovite and amount of weathering. Spodumene pegmatite dikes were modeled based on input drillhole data at nominal 40 m spacings, including orientated core measurements, and surface mapping. Where drill data is sparse 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. Pegmatites are un-zoned Albite – Spodumene type with unproblematic mineralogy. Within resource pegmatites, discrete zones of intense spodumene to muscovite alteration result locally lower Li ₂ O grades. A small portion of resource pegmatite (i.e. <5%) extends into weathered rock and has a variable clay content (<25%) that may be associated with locally lower Li ₂ O grades.
Estimation	Lithium and by-product grade estimation and modeling techniques are classified as robust after consideration of the validation exercises undertaken as part of this study. Grade data have distributions with limited skew, and few extreme values, allowing established linear estimation techniques to be used. Estimated block grades reflect input samples, are not sensitive to cut-off grade choice, and are comparable when calculated by OK or IDW ² methods.

Uncertainty Source	Discussion
	At the current typical data spacing (i.e., 40 m x 40 m), pegmatites appeared curvi-planer and were estimated using domain scale anisotropy models with appropriately large parent block sizes. Where data is closer spaced, local undulations in pegmatite morphology could be resolved better using dynamic (i.e., locally adjusting) anisotropy models with smaller block sizes. Estimated in situ dry bulk densities were assigned to resource pegmatites and waste rocks on a weathering domain basis using representative averages obtained from an extensive database of bulk density determinations. No correlation was modeled between density and pegmatite Li ₂ O grade, or individual waste rock units.
Deleterious Elements	Within the Core resource model, deleterious elements, such as iron are reported to be at acceptably 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. Core Property pegmatites have comparable mineralogical and physical properties to pegmatites at the Central and Huffstetler properties.

Resource classification was undertaken using classification boundary strings assigned to the block model in a “cookie-cutter” fashion. Strings define a region of blocks that, on average, met criteria set out in Table 11-17.

Table 11-17: Classification Criteria and Justification

Classification	Criteria and Justification
Inferred	Criteria: All blocks captured in pegmatite dike interpretation wireframes below the topography surface are classified as Inferred. Intensely weathered near surface pegmatite segments, or zones of intensely altered pegmatite are classified as Inferred, irrespective of local drill spacing. Justification: As detailed in Table 11-16, spodumene pegmatite is modelled where supported by at least

	limited data of sufficient certainty and spacings (i.e., 80 m) to enable a reasonable estimate of Mineral Resource quantity and grade.
Indicated	<p>Criteria: Indicated Resources are defined within major pegmatite dikes that have an along strike and down dip continuity greater than 200 m and 50 m respectively and are informed by at least two drillholes and eight samples within a range of approximately 30 m to the nearest drillhole in the along strike or strike and down dip directions.</p> <p>Justification: As detailed in <i>Table 11-16</i>, multiple drill holes at a nominal spacing of 40 m can provide adequate data to resolve major spodumene pegmatites with a certainty to support broad estimates of Mineral Resource quantity and grade adequate for long-term mine planning.</p>
Measured	<p>Criteria: No Measured Resources are estimated.</p> <p>Justification: Data density does not allow conclusive spodumene pegmatite, weathering domain, and waste rock resolution that can support local estimates of Mineral Resource quantity and grade that are adequate for detailed mine planning.</p>

Distance between drill holes and Indicated and Inferred resource blocks is shown in Figure 11-5, 75% of Indicated resource blocks are within 27 m to the nearest drill hole. The resource classification applied at the Core and Central properties is illustrated in Figure 11-6.

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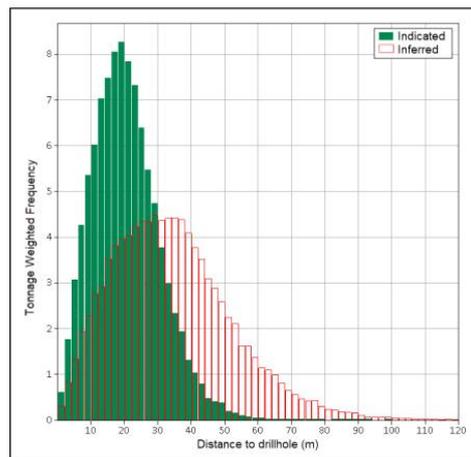


Figure 11-5 - Classified Block Distances from Drill Hole

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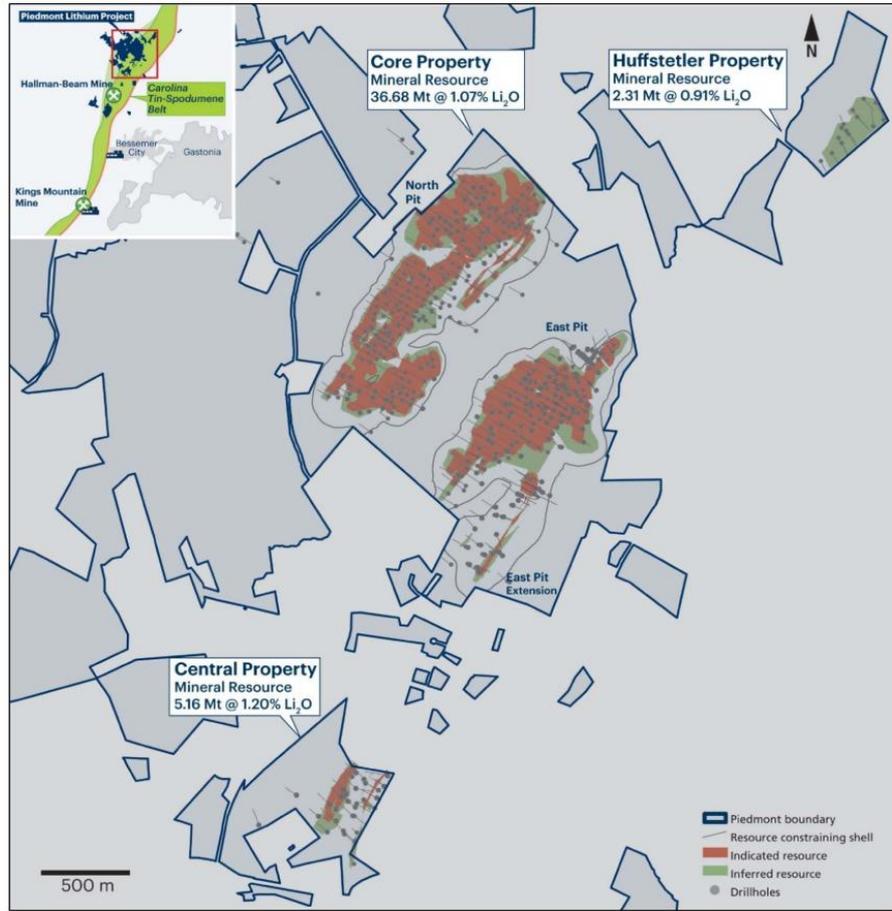


Figure 11-6 - Carolina Lithium Property Mineral Resource Classification

11.4 REASONABLE PROSPECTS FOR ECONOMIC EXTRACTION

SEC Regulations S-K 1300 require that all reports of Mineral Resources must have reasonable prospects for eventual economic extraction regardless of the classification of the resource.

The depth, geometry, and grade of pegmatites at the Project make them amenable to exploitation by open cut mining methods. Inspection of drill core from the Carolina Lithium Project properties and the close proximity of open pit mines in similar rock formations indicate that ground conditions are suitable for this mining method.

11.4.1 Lithium

Lithium Mineral Resources at the Project are reported above a cut-off of 0.4% Li₂O cut-off which approximates cut-off grades used at comparable spodumene-bearing pegmatite deposits exploited by open pit mining.

Mineral Resources at the Project are amenable to exploitation by an integrated operation with an open pit mine and concentrator supplying spodumene concentrate to commodity markets or the Company's planned lithium hydroxide chemical plant. This study envisions a multi-decade mine life and the application of conventional mining and processing technology. PLL has used Roskill's long term spodumene concentrate price average of US\$1,893/t SC6 as the basis determining reasonable prospects for eventual economic extraction. Parameters include a spodumene concentration recovery of 77%.

Core Property

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 51° and strip ratio of 12, mining cost of US\$2.50/t, spodumene concentration cost of US\$25/t, a commodity price of US\$1,893/t of Spodumene Concentrate with a grade of 6% Li₂O ("SC6") and with appropriate recovery and dilution factors. Material falling outside of this shell is considered to not meet reasonable prospects for eventual economic extraction.

Table 11-18. Piedmont Whittle Resource Constraining Pit Shell Parameters

Item	Notation	Unit	Value
SC6 Price	(P)	\$/t	1,893
Mining Cost (ore and waste)	(m)	\$/t	2.5
Strip Ratio (waste:ore)	(s)		12
Total Mining Cost (m+m×s)	(m _t)	\$/t	32.5
Concentrator Cost	(c)	\$/t	25
Dilution	(d)	%	10
Mining Recovery	(y _m)	%	100
Concentrator Recovery	(y _c)	%	77
SC6 to Li ₂ O Conversion Factor	(f)		0.08
Theoretical Cutoff Grade - SC6	(G _{SC6})	%	4.62
Theoretical Cutoff Grade - Li ₂ O	(G _{Li2O})	%	0.37
Selected Cutoff Grade - Li₂O			0.40

Using the parameters detailed in Table 11-18, the following equations are used as the basis for selecting MRE reporting cut-off of 0.4% Li₂O cut-off which approximates cut-off grades used at comparable spodumene-bearing pegmatite deposits exploited by open pit mining.

$$G_{SC6} = \frac{m_t + (c \times 1 + d)}{y_m \times y_c \times P}$$

$$G_{Li2O} = G_{SC6} \times f$$

The cut off calculation uses a total mining cost for both ore and waste based on the strip ratio. The resulting value is higher than the theoretical marginal cut-off grade based on the cost of mining ore only. The higher Li₂O cut-off value is appropriate because of lower spodumene recoveries and process inefficiencies for lower grade material.

Out of a total tonnage of 37.90 Mt, 36.68 Mt falls within the conceptual shell. Areas excluded include speculative blocks at depth and at the periphery of the deposit. The surface extent of the resource constraining shell is shown in Figure 11-6. A cross-section view of the resource constraining shell at the south of B-G and S corridors is shown in Figure 6-5 and at the F corridor is shown in Figure 6-6.

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 and are also reported using a 0.4% Li₂O cut-off grade.

11.4.2 By-Products

Quartz, feldspar, and muscovite mica occur as essential rock-forming minerals of the Carolina Lithium Project pegmatites and comprise approximately 80% of the mineral assemblage and estimated Mineral Resources that are reported in Table 6-1.

Feldspar and mica have been historically mined and produced from North Carolina where spodumene -bearing pegmatite deposits located northwest of Kings Mountain were mined until 1998. The historically mined pegmatite feed grade is quoted to be "20% spodumene, 32% quartz, 27% albite, 14% microcline, 6% muscovite, and 1% trace minerals", and that the "fairly uniform grade of the crude ore allowed recovery of feldspar and mica by-products" (Kestler, 1961).

11.5 QUALIFIED PERSON'S MINERAL RESOURCE ESTIMATES

Mineral Resources for the project, representing in-situ lithium-bearing pegmatites, are reported in accordance with (SEC) Regulation S-K 1300 standards and are therefore suitable for public release. Based on the work described, detailed modelling of the deposits, and after considering all the parameters defined, MRE were prepared as of October 20, 2021 for property controlled by PLL.

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Lithium MRE include tonnage estimates for lithium oxide (Li₂O), Lithium Carbonate Equivalent (LCE) whereby one tonne of Li₂O is equivalent to 2.473 tonnes LCE, and lithium hydroxide mono-hydrate (LiOH·H₂O) tonnage whereby one tonne of Li₂O is equivalent to 2.81 tonnes LiOH·H₂O.

The current global lithium MRE is reported above a cut-off of 0.4% Li₂O.

The pricing data assumes a long-term spodumene concentrate price of US\$1,893 per metric tonnee for calendar year 2021.

Section 11.5.1 discloses MRE for the Project inclusive of Mineral Reserves estimated for the Core Property that are detailed in report Section 12.2. MRE for the Project exclusive of Mineral Reserves estimated for the Core Property are stated in Section 11.5.2.

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11.5.1 MRE Summary Inclusive of Reserves

The current global lithium MRE inclusive of Mineral Reserves is disclosed by classification in Table 11-19. The current lithium and by-product MRE inclusive of Mineral Reserves is disclosed globally and for each property by classification in Table 11-20.

Table 11-19: Summary of Lithium Mineral Resources Inclusive of Reserves as of October 20, 2021
Based on US\$1,893 /t SC6

	Tonnes (Mt)	Grade (Li ₂ O%)	Li ₂ O (t)	LCE (t)	LiOH·H ₂ O (t)	Cut-Off Grade (% Li ₂ O) ¹	Metallurgical Recovery
Indicated ³	28.2	1.11	313,000	774,000	879,000	0.4	77% ²
Inferred ³	15.9	1.02	162,000	401,000	455,000		

Note 1 – Based on long-term pricing of US\$ 1,893/t SC6, US\$ 101/t quartz, US\$ 54/t feldspar, and US\$ 80/t mica. Byproduct mineral resources are estimated only from the spodumene bearing pegmatites which comprise the Mineral Resource Estimate
Note 2 – Metallurgical recovery from spodumene concentration.
Note 3 – Tabulated Mineral Resources for the Project are inclusive of the Mineral Reserves estimated for the Core Property. Some figures may not add up due to rounding.

Table 11-20: Summary of Quartz, Feldspar, and Mica Mineral Resources Inclusive of Reserves, as of October 20, 2021

		Li ₂ O		Quartz		Feldspar		Mica		
Cut-Off Grade (Li ₂ O %) ¹		0.4		0.4		0.4		0.4		
Metallurgical Recovery (%)		77 ²		50.8		51.1		35.5		
Category	Deposit	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)
Indicated ⁵	Core ³	25.75	1.10	0.282	29.59	7.62	45.06	11.60	4.29	1.10
	Central ⁴	2.47	1.30	0.031	28.79	0.71	45.16	1.12	3.24	0.08
	Huffstetler ⁴	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Inferred ⁵	Core	10.93	1.02	0.111	29.13	3.18	45.52	4.97	4.18	0.46
	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

Note 1 – Based on long-term pricing of US\$ 1,893/t SC6, US\$ 101/t quartz, US\$ 54/t feldspar, and US\$ 80/t mica. Byproduct mineral resources are estimated only from the spodumene bearing pegmatites which comprise the Mineral Resource Estimate
Note 2 – Metallurgical recovery from spodumene concentration.
Note 3 – Tabulated Mineral Resources for the Core Property are inclusive of the Mineral Reserves estimated for the Core Property.
Note 4 – Reserves have not been estimated for the Central and Huffstetler Properties. Tabulated Mineral resources for these Properties are exclusive of Mineral Reserves.
Note 5 – Tabulated Mineral Resources for the Project are inclusive of the Mineral Reserves estimated for the Core Property. Some figures may not add up due to rounding.

11.5.2 MRE Summary Exclusive of Reserves

The current global lithium MRE exclusive of Mineral Reserves is stated by classification in Table 11-21. The current lithium and by-product MRE exclusive of Mineral Reserves is stated globally and for each property by classification in Table 11-22.

Table 11-21: Summary of Lithium Mineral Resources Exclusive of Reserves as of October 20, 2021
Based on US\$1,893 /t SC6

	Tonnes (Mt)	Grade (Li ₂ O%)	Li ₂ O (t)	LCE (t)	LiOH-H ₂ O (t)	Cut-Off Grade (% Li ₂ O) ¹	Metallurgical Recovery
Indicated ²	10.0	1.14	112,000	774,000	315,000	0.4	77% ²
Inferred ³	15.9	1.02	162,000	401,000	455,000		

Note 1 – Based on long-term pricing of US\$ 1,893/t SC6. Byproduct mineral resources are estimated only from the spodumene bearing pegmatites which comprise the Mineral Resource Estimate.
Note 2 – Metallurgical recovery from spodumene concentration.
Note 3 – Tabulated Mineral Resources for the Project are exclusive of the Mineral Reserves estimated for the Core Property. Some figures may not add up due to rounding.

Table 11-22: Summary of Quartz, Feldspar, and Mica Mineral Resources Exclusive of Reserves, as of October 20, 2021

		Li ₂ O		Quartz		Feldspar		Mica		
Cut-Off Grade (Li ₂ O %) ¹		0.4		0.4		0.4		0.4		
Metallurgical Recovery (%)		77 ²		50.8		51.1		35.5		
Category	Deposit	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	Tonnes (Mt)	Grade (%)	
Indicated	Core ³	7.49	1.08	0.081	29.63	2.22	46.23	3.46	4.19	0.31
	Central ⁴	2.47	1.30	0.031	28.79	0.71	45.16	1.12	3.24	0.08
	Huffstetler ⁴	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
	Total ⁵	9.96	1.14	0.112	29.42	2.93	45.96	4.58	3.96	0.39
Inferred	Core	10.93	1.02	0.111	29.13	3.18	45.52	4.97	4.18	0.46
	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
	Total ⁵	15.93	1.02	0.162	29.22	4.66	45.67	7.28	4.03	0.64

Note 1 – Based on long-term pricing of US\$ 1,893/t SC6, US\$ 101/t quartz, US\$ 54/t feldspar, and US\$ 80/t mica. Byproduct mineral resources are estimated only from the spodumene bearing pegmatites which comprise the Mineral Resource Estimate.
Note 2 – Metallurgical recovery from spodumene concentration.
Note 3 – Tabulated Mineral Resources for the Core Property are exclusive of the Mineral Reserves estimated for the Core Property.
Note 4 – Reserves have not been estimated for the Central and Huffstetler Properties. Tabulated Mineral resources for these Properties are exclusive of Mineral Reserves.
Note 5 – Tabulated Mineral Resources for the Project are exclusive of the Mineral Reserves estimated for the Core Property. Some figures may not add up due to rounding.

11.6 QUALIFIED PERSON'S OPINION

Based on the data review, the attendant work done to verify the data integrity and the creation of an independent geologic model, McGarry Geoconsulting believes this is a fair and accurate representation of PLL's lithium resources.

12 ORE RESERVE ESTIMATES

12.1 ASSUMPTIONS, PARAMETERS AND METHODOLOGY

All Ore Reserves on the subject properties are classified as *probable*, and consider relevant “modifying factors” including mining, processing, economic, marketing, legal, environmental, social, and governmental factors. Mineral resources which serve as the basis of reserve delineation only consider classifications of inferred and indicated. As such, by definitions, all ore reserves are limited to a probable category, as no measured resources currently exist on the property. The estimation of probable ore reserves follow confidence levels associated with Indicated Resources which are defined to have a certainty to support broad estimates related to quantity and grade adequate for long-term mine planning.

- > **Proven Ore Reserves** are the economically mineable part of a measured mineral resource, adjusted for diluting materials and allowances for losses when the material is mined. It is based on appropriate assessment and studies in consideration of and adjusted for reasonably assumed modifying factors. These assessments demonstrate that extraction could be reasonably justified at the time of reporting.
- > **Probable Ore Reserves** are the economically mineable part of an indicated mineral resource, and in some circumstances a measured resource, adjusted for diluting materials and allowances for losses when the material

is mined. It is based on appropriate assessment and studies in consideration of and adjusted for reasonably assumed modifying factors. These assessments demonstrate that extraction could be reasonably justified at the time of reporting.

An estimate of Ore Reserves was made following long-term mine planning completed during the Feasibility Study and is based on the Indicated Mineral Resources contained within the Project's Core Property. Ore reserves are stated as undiluted run-of-mine material as delivered to the concentrator facility. Ore reserves exclude losses incurred during concentration and effective recovery factors incurred to ultimately produce an SC6 lithium concentrate and lithium hydroxide. Appropriate metallurgical recoveries reflective of losses incurred during the concentration process are included in reserve tables.

The Ore Reserves have been estimated in accordance the requirements of S-K 1300 and the JORC Code. In order to derive various mining limits, an optimization routine completed to produce a production schedule of 1.9 Mt/year ROM feed to the concentrator. The optimization resulted in a total product tonnage of 20.1 Mt, at an average diluted grade of 1.00 percent Li₂O.

The mine plan was generated based on PLL's current mine permit application and assumptions of acquisition of adjoining properties and reasonable permit modification/revisions. All ore reserves estimated herein are contained on properties currently controlled by PLL. Due to regulatory permitting requirements, some adjoining properties will need to be purchased to remove regulated offsets to obtain the tonnages shown in this feasibility study. It is believed this is achievable before operations start and appropriate costs for property acquisitions have been included in capital cost section of the TRS.

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12.1.1 Optimization Methodology

Block Model & Cutoff Grade

A revised block models for the Core Property was received from MGG in August 2021 and used for optimizations of resource for this feasibility study report using Maptek's Vulcan and Evolution programs. Cutoff grades for reserve estimation mimic those utilized by MGG for resource delineation at 0.4% Li₂O and a spodumene concentrate sale price of \$1,893 dollars per ton. MM&A reviewed the derivation of the MGG cutoff grade and deemed the 0.4% Li₂O appropriate for reserve delineation when coupled with other pertinent modifying factors.

All floodplain restrictions were observed for the optimization process and West Pit was combined with North Pit through the north creek channel above the floodplain restrictions under the reasonable assumption of an obtainable mine permit modification. Production requirements for Core Property were based on the concentrator capacity of 1,900,000 tonnes per year (1.096-percent undiluted Li₂O) with Year 1 being reduced by 40 to 50-percent for startup and continuing through the life of the Core Property mining. Results of the Optimization for Core Properties yielded 20.1 Mt of process ore at a 10-percent diluted grade of 0.996-percent (see Table 12-1). Figure 12-2 show the Core Property optimized pits mining through the north channel and maintaining the floodplain, wetland and permit restrictions. All production tonnes were classified as Probable Ore Reserves.

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Table 12-1: Optimization Results-Annual Production Schedule

Period	Year	Quarter	Process (Mt)	Metal Li ₂ O pct Kt	Diluted Li ₂ O %	Tonnes (Mt)			Strip Ratio	Dump (Mt)	Total (Mt)
						Proven	Probable	Pvn + Pro			
1	1	1	0.24	2.11	1.11	0	0.24	0.22	20.63	4.90	5.13
2	1	2	0.24	1.78	0.97	0	0.24	0.22	14.16	3.40	3.64
3	1	3	0.24	2.10	1.09	0	0.24	0.22	5.05	1.22	1.47
4	1	4	0.24	2.10	1.09	0	0.24	0.22	9.33	2.26	2.50
5	2	1	0.47	4.29	1.14	0	0.47	0.43	7.55	3.53	4.00
6	2	2	0.47	4.07	1.09	0	0.47	0.43	7.24	3.42	3.90
7	2	3	0.48	3.72	1.01	0	0.48	0.43	18.25	8.73	9.20
8	2	4	0.48	3.28	0.91	0	0.48	0.43	22.82	10.92	11.39
9	3	1	0.47	3.29	0.93	0	0.47	0.43	17.83	8.41	8.88
10	3	2	0.47	3.80	1.03	0	0.47	0.43	10.11	4.77	5.24
11	3	3	0.48	3.14	0.89	0	0.48	0.43	16.66	7.95	8.42
12	3	4	0.48	3.83	1.03	0	0.48	0.43	4.91	2.34	2.82
13	4	1	0.47	3.47	0.97	0	0.47	0.43	11.77	5.51	5.97
14	4	2	0.47	3.23	0.91	0	0.47	0.43	10.33	4.88	5.36
15	4	3	0.48	3.54	0.97	0	0.48	0.43	14.36	6.87	7.35
16	4	4	0.48	3.28	0.92	0	0.48	0.43	10.93	5.23	5.70
17	5	1	0.47	3.40	0.96	0	0.47	0.43	15.15	7.09	7.56
18	5	2	0.47	3.50	0.97	0	0.47	0.43	13.21	6.25	6.72
19	5	3	0.48	3.98	1.06	0	0.48	0.43	10.11	4.84	5.31
20	5	4	0.48	4.22	1.11	0	0.48	0.43	9.36	4.48	4.95
21	6	1-4	1.90	15.02	1.02	0	1.90	1.73	6.35	12.04	13.94
22	7	1-4	1.90	13.50	0.94	0	1.90	1.73	13.59	25.78	27.68
23	8	1-4	1.90	14.00	0.97	0	1.90	1.73	14.27	27.08	28.98
24	9	1-4	1.90	14.14	0.97	0	1.90	1.73	11.35	21.54	23.44
25	10	1-4	1.90	15.09	1.02	0	1.90	1.73	10.74	20.38	22.28
26	11	1-4	1.90	15.28	1.03	0	1.90	1.73	8.90	16.89	18.79
27	12	1	0.15	1.10	0.97	0	0.15	0.14	12.23	1.82	1.97
Total			20.09	154.29	1.00	0	20.09	20.09	11.58	232.52	252.61



Figure 12-1 - Optimization Scenario Total Process and Dump Production Tonnes

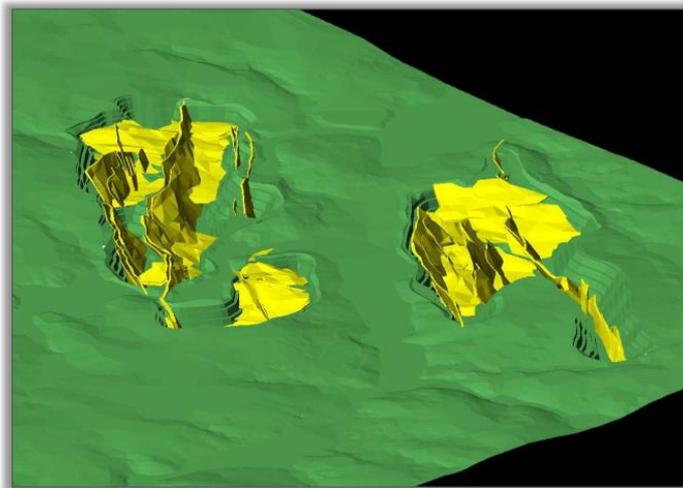


Figure 12-2 - Core Property Optimized Pits (orebody shown in yellow)

12.1.2 Optimization Parameters

Optimization parameters for the project were compiled using input from PLL, MGG, HDR, and MM&A and are shown in Table 12-2, with the pit geometry shown in Figure 12-3. Geotechnical review by MM&A resulted in a final wall berm (batter) height of 24 meters while the working berm (batter) height should be 12 meters for ore

control. This indicates two working faces can be combined when the final wall is reached through the mining cycle with a berm width of 9.5 meters maintained every 24 meters of wall (batter) height.

Table 12-2: Optimization Parameters by Input Group

Group / Item	Unit	Value	Source
Geometry			
Overburden Slope	°	27	MM&A
Rock Slopes	°	75	MM&A
Interramp Slope	°	57	MM&A
Overall Slope	°	51	MM&A
Berm Width	m	9.5	MM&A
Batter Angle	°	75	MM&A
Berm (Batter) Height (working)	m	12	MM&A
Berm (Batter) Height (final wall)	m	24	MM&A
Minimum Mining Width	m	20	MM&A
Ramp Width	m	30	MM&A

Total Depth	m	192	MM&A
Block Dimension X	m	2	MGG
Block Dimension Y	m	4	MGG
Block Dimension Z	m	1	MGG
Mining			
Production Rate	Tonne/year	1,900,000	PLL
Ramp Grade	%	10	MM&A
Concentrator Recovery	%	Varies (77avg)	PRIMERO, PLL
Dilution	%	10	MM&A, PLL
Specific Gravity (ore)		2.72	MGG
Specific Gravity (waste rock)		2.81	MGG
Specific Gravity (weathered)		1.34	MGG
Specific Gravity (soil)		1.32	MGG
Restrictions		flood & wetlands	HDR
Vertical Rate of Advance	m	96	MM&A
Financial			
Mining Cost	US\$	\$2.25	PLL
Stockpile Cost	US\$	\$1.25	MM&A, PLL
Rate of Return	%	8	MM&A

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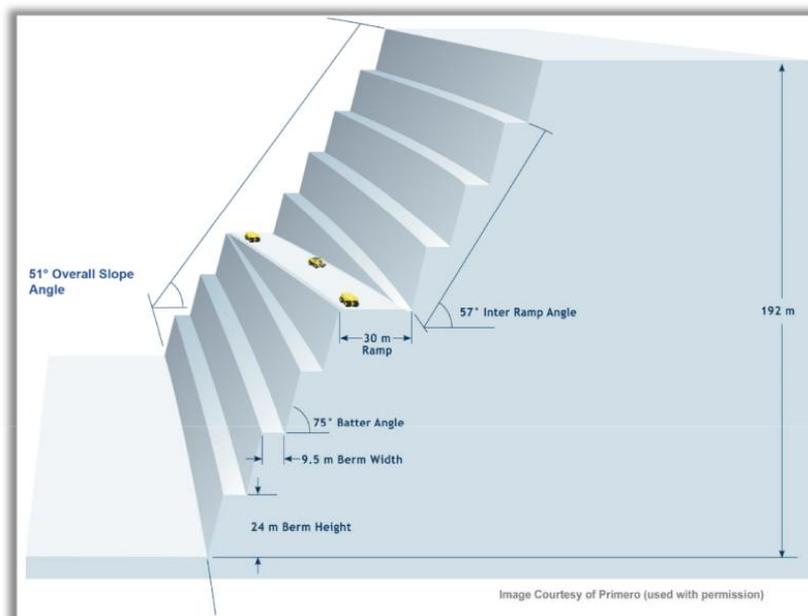


Figure 12-3 - Optimization Geometric Parameters

Diluted and undiluted data outputs from LOM plan sequencing were processed into Microsoft® Excel spreadsheets and summarized on a quarterly and annual basis for processing into the economic model.

Revenue streams as projected in the economic portions of the report assume a sales realization (FOB-mine) of \$18,000 per ton for Lithium Hydroxide and are fixed throughout the project's life in the economic model. The conversion of ore reserves (ROM-basis) via concentration and chemical processing to lithium hydroxide are included in PLL's business plan, and as such, the costs of such processes and appropriate revenue streams are included in financial modeling.

Resource modeling and mine optimization as described in the report was used as a basis for the reserve estimate. Probable mineral reserves were derived from the defined resource considering relevant processing, economic (including technical estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic, and regulatory factors.

12.2 QUALIFIED PERSON'S ESTIMATES

Reserve tonnage estimates provided herein report reserves derived from in-situ resource tons presented in Section 11, and not in addition to mineral resources. Probable reserves were derived from the defined resource

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considering relevant mining, processing, infrastructure, economic (including estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic and regulatory factors. The mineral reserves, as shown in Table 12-3, are based on a technical evaluation of the geology and a feasibility study of the deposits. The extent to which the reserves may be affected by any known environmental, permitting, legal, title, socio-economic, marketing, political, or other relevant issues has been reviewed rigorously. Similarly, the extent to which the estimates of reserves may be materially affected by mining, metallurgical, infrastructure and other relevant factors has also been considered.

Table 12-3 - Carolina Lithium Project – Estimate of Ore Reserves (undiluted), ROM Basis

Ore Reserves Category	Tonnes, ROM Basis, Undiluted (Mt)	Grade, ROM Basis, Undiluted (Li ₂ O%)	Li ₂ O (t)	LCE (t)	LiOH·H ₂ O (t)	Cut-Off Grade (% Li ₂ O)	Metallurgical Recovery Concentrator (%)	Metallurgical Recovery Conversion Plant (%)
Proven	-	-	-	-	-	0.4	77	91
Probable	18.26	1.10	200,000	495,000	562,000			
Total	18.26	1.10	200,000	495,000	562,000			

Note 1: Reserves are expressed as tonnages effectively delivered to the run-of-mine (ROM) pad, prior to the application of losses and recovery factors (i.e., metallurgical recovery as expressed above) incurred during concentration and conversion. Block value pricing to support ore reserves is based upon an intermediate 6-percent Li₂O concentrate product after the processing of ROM reserves in the Company's planned concentrator facility.

Note 2: Metallurgical recovery of 77-percent for lithium ore is associated with the production of a 6-percent spodumene concentrate in the Company's planned Concentrator. Block values and cutoff grades assume an intermediate spodumene concentrate product with a value of \$1,893/t.

Note 3: Metallurgical recovery of 91-percent is associated with the production of lithium hydroxide in the Company's planned chemical conversion plant. Revenue streams for financial modeling assume the production and sale of lithium hydroxide at \$18,000/t via the processing of spodumene concentrate derived from ROM ore reserves.

The results of the feasibility study as summarized in this TRS define an estimated 18.26 tonnes of probable spodumene reserves (undiluted basis). Reserves estimated have an average grade of 1.10% Li₂O, and have been cutoff at modeled grades of 0.4% Li₂O.

12.3 QUALIFIED PERSON'S OPINION

The estimate of mineral reserves was determined in accordance with the SEC S-K1300 and JORC standards. The Qualified and Competent Persons responsible for the derivation of Probable Ore Reserves have considered pertinent modifying factors, inclusive of geological, environmental, regulatory, and legal factors, in converting a portion of the Mineral Resource to Mineral Reserve.

Probable Ore Reserves, derived from previously stated Indicated Mineral Resources, incorporate reasonable expectations of costs and performance. Historic mining ventures in the TSB yield additional confidence in the likelihood of a successful mining project. The Qualified and Competent Persons have considered the rules and regulations promulgated by the Joint Ore Reserve Committee and US Securities and Exchange Commission in estimating Ore Reserves. The Qualified and Competent Persons find the assumptions and modifying factors utilized the DFS to be sufficient and satisfactory in the delineation of Probable Ore Reserves based upon JORC and S-K 1300 regulations.

13 MINING METHODS

13.1 PIT SLOPE GEOTECHNICAL ASSESSMENT

During previous work on the project, MM&A completed a preliminary pit slope geotechnical characterization and assessment including basic laboratory rock strength testing, discontinuity orientation data collection, kinematic bench-scale stability assessment, and overall pit slope stability assessment. The pit slope stability assessment provides general guidance with regard to bench, inter-ramp, and overall pit slope for pit design. Subsequent pit slope geotechnical work completed in 2021 included drilling of two holes along the west side of East Pit to refine the recommended offset distance between the pit and floodplain areas.

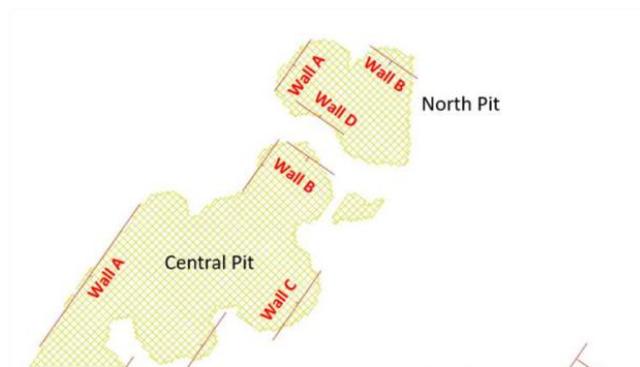
Rock samples for basic intact rock strength testing were collected by MM&A geologists from rock core available in PLL's core storage facility. The samples were shipped to the University of Kentucky (UK) for testing in their Rock Mechanics Laboratory facilities. Geotechnical test results are summarized in the table below.

Table 13-1: Geotechnical Rock Lab Test Results

Sample ID	Lab No.	Uniaxial Compressive Strength		Bulk Density		Indirect Tensile Strength		Bulk Density	
		(psi)	(MPa)	lbs/ft ³	kg/m ³	(psi)	(MPa)	lbs/ft ³	kg/m ³
17-BD-112-GT1	1a	24,930	171.9	193.25	3,095.50	1,332.3	9.2	194.79	3,120.25
	1b					1,294.9	8.9	205.14	3,286.04
	1c					1,326.1	9.1	206.19	3,302.79
17-BD-112-GT2	2a	8,634	59.5	187.11	2,997.16	1,036.1	7.1	204.68	3,278.68
	2b					1,059.2	7.3	199.09	3,189.14
	2c					1,686.8	11.6	216.67	3,470.71
17-BD-112-GT3	3a	13,411	92.5	171.71	2,750.45	1,411.1	9.7	224.66	3,598.78
	3b					1,006.7	6.9	215.04	3,444.65
17-BD-112-GT4	4a	8,205	56.6	175.88	2,817.30	996.6	6.9	220.47	3,531.57
	4b					1,353.9	9.3	219.83	3,521.30
	4c					1,321.4	9.1	213.90	3,426.28
17-BD-112-GT5	5a	13,372	92.2	172.35	2,760.75	704.5	4.9	226.52	3,628.48
	5b					793.6	5.5	212.84	3,409.34
	5c					774.2	5.3	214.12	3,429.92

The rock strength test results indicate that intact host rock is strong, with some variability in strength due to failure along existing features such as veins and other smaller discontinuities. The intact rock strength test results are generally consistent with other tests conducted on the waste rock, such as standard railroad ballast testing which also indicated that the waste rock is expected to be strong and durable.

The orientations of highwalls in the proposed mine pit shells are key inputs for the stability assessment, as potential instability is often caused by the interaction of existing discontinuities (fractures) in the rock with the pit wall orientations. The general pit wall orientations are indicated in the following figure and summarized in the table below.



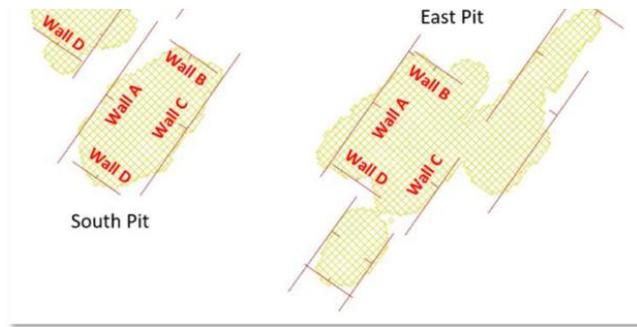


Figure 13-1 - General Pit Wall Orientations

Table 13-2: General Pit Wall Orientations for Proposed Pits

Wall	General Wall Name	Wall Dip Direction (Degrees Azimuth)
A	SE-Dipping	125
B	SW-Dipping	215
C	NW-Dipping	305
D	NE-Dipping	35

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The assessment utilized discontinuity data extracted from oriented exploration core holes and from two Acoustic Televiewer (ATV) downhole geophysical logs run in exploration holes. The stereonet projection below is a bottom hemisphere pole plot summarizing the sets of discontinuities identified from the available data. The sources of the data points are identified and labeled on the stereonet. The dip direction of a discontinuity set is represented in degrees azimuth (North = 0 degrees, East = 90 degrees, South = 180 degrees, West = 270 degrees) and the dip angle (from horizontal) of a set is represented as values between 0 and 90 degrees as labelled in the figure. For example, Set 1 dips northwest at an angle of approximately 76 degrees, Set 3 dips southeast at an average angle of approximately 65 degrees, and the orientation for all other sets are represented in a similar manner.

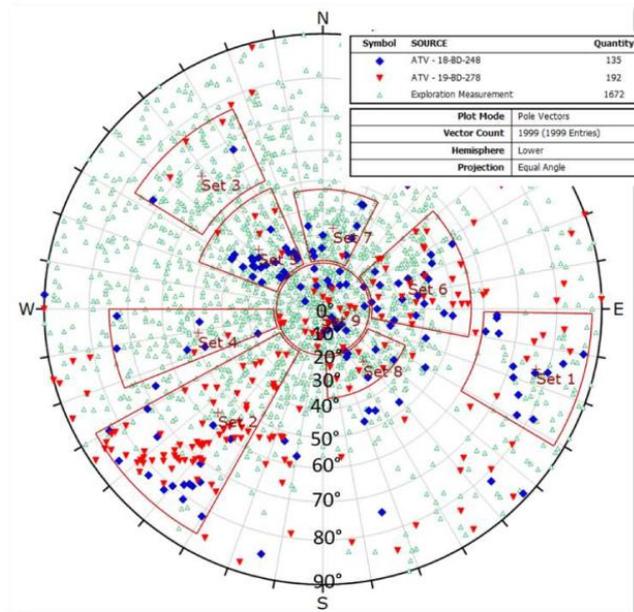


Figure 13-2 - Stereonet Representing Discontinuity Patterns Identified in Project Area

The stereonet data and discontinuity sets were utilized to complete a preliminary kinematic assessment to determine the potential for wedge and plane rock failures in the proposed pit wall slopes. The kinematic assessment utilized Rocscience, Inc. (Rocscience) programs including DIPS, RocPlane, and SWedge. The assessment utilized a Probabilistic Approach to determine, for any given bench angle, the probability of each potential failure in each wall of the proposed pits and a suggested minimum bench width based on the estimated size of potential failures. The results of the kinematic assessment were utilized to define bench dimensions that were combined with haul road ramp dimensions and pit wall heights to subsequently determine reasonable overall pit wall angles.

The expected stability of the overall proposed pit wall slopes was assessed using the computer program SLIDE3 by Rocscience, using the Spencer analysis method. Inputs to the modeling exercise include the expected pit wall

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surface (including bench angle, bench width, bench height, inter-ramp angle, ramp width, and overall pit wall height), estimated strength of the pit wall rock mass, and an assumed groundwater level. The strength of the wall rock for the proposed pits was estimated based on available information using the Rock Mass Rating (RMR) System.¹ The RMR score for the amphibolite wall rock is 65-70, suggesting it is Class II – Good Rock. The RMR scoring methodology accounts for the uniaxial compressive strength of the rock, Rock Quality Designation (RQD)/fracture frequency data, and the condition of the observed discontinuities in the rock. The overall pit wall stability assessment considered a water table at depth of 20 meters below the pit walls.

Results of the assessment indicate that an overall pit wall angle of 51 degrees is expected to have a factor of safety of ~1.4, given the assumptions discussed above. The overall angle of 51 degrees assumes a bench angle of 75 degrees, a final bench height of 24 meters, a final berm width of 9.5 meters, and a single 30-meter haul road ramp width. The results of the pit slope stability assessment summarized above were used to design the pits for the current iterations of pit slope optimization.

13.2 HYDROGEOLOGICAL ASSESSMENT

Hydrogeological assessment for the project was completed by HDR, Inc. (HDR). The tasks involved included surface water and groundwater quality monitoring; streamflow monitoring; pump testing; groundwater level monitoring; and creation of a groundwater model using MODFLOW. MM&A has received and reviewed memorandums and data summaries from HDR. HDR reports on the hydrogeology of the project area include “*Technical Memorandum: Aquifer Test, Piedmont Lithium – Gaston County, North Carolina*” (revised version submitted February 18, 2019) and “*Technical Memorandum: Groundwater Model, Piedmont Lithium – Gaston County, North Carolina*” (submitted June 28, 2019). An additional groundwater modeling report, titled “*Technical Memorandum: Groundwater Model – Piedmont Lithium, Gaston County, North Carolina*”, was also completed by HDR in August 2021.

HDR’s groundwater modeling results form a basis for selection of pit dewatering equipment and operating cost considerations. The project will involve pumping from two pits simultaneously at times throughout the mine life, with pumping rates varying depending on the stage of mining and pits being excavated. The predicted dewatering rates range from 575 gallons per minute (gpm) in the first year to maximum pumping rates of 2,300 gpm and 2,000 gpm in years 2 and 12, respectively. The estimated average for the mine life is on the order of 1,400 gpm.

13.3 PRODUCTION RATES

Production scheduling for the PLL project site is based on providing 1,900,000 tonnes per year of ROM ore to the concentrator from the Core property. The following parameters are used for production scheduling:

- Concentrator ROM feed of 1,900,000 tonnes per year;
- Probable reserves only for all years of operations;
- Target output of 230,000 tonnes per year of 6-percent Li₂O concentrate;
- Mine dilution of ore at 10 percent;
- 50-percent production for first year of start-up;
- Processing recovery varies by year (average 77 percent spodumene concentrate recovery);

- First five years scheduled by quarter, yearly schedule from year six to end of life;

Production scheduling was performed using Maptek Evolution software and shown in Table 13-3.

Table 13-3 - Production Schedule

Year	Quarter	Property Location	Process (Mt)	Waste (Mt)	Diluted Li ₂ O %	% Proven	Strip Ratio	6% Conc. (Kt)
1	1	South	0.24	4.90	1.11	0%	20.63	35.16
1	2	South	0.24	3.40	0.97	0%	14.16	29.73
1	3	South	0.24	1.22	1.09	0%	5.05	35.00
1	4	South	0.24	2.26	1.09	0%	9.33	35.00
2	1	South	0.47	3.53	1.14	0%	7.55	71.54
2	2	South	0.47	3.42	1.09	0%	7.24	67.87
2	3	South/East	0.48	8.73	1.01	0%	18.25	62.05
2	4	East	0.48	10.92	0.91	0%	22.82	54.67
3	1	East	0.47	8.41	0.93	0%	17.83	54.83
3	2	East	0.47	4.77	1.03	0%	10.11	63.26
3	3	East	0.48	7.95	0.89	0%	16.66	52.42
3	4	East	0.48	2.34	1.03	0%	4.91	63.81
4	1	East	0.47	5.51	0.97	0%	11.77	57.90
4	2	East	0.47	4.88	0.91	0%	10.33	53.79
4	3	East	0.48	6.87	0.97	0%	14.36	58.97
4	4	East	0.48	5.23	0.92	0%	10.93	54.74
5	1	East	0.47	7.09	0.96	0%	15.15	56.62
5	2	East	0.47	6.25	0.97	0%	13.21	58.40
5	3	East	0.48	4.84	1.06	0%	10.11	66.40
5	4	East	0.48	4.48	1.11	0%	9.36	70.31
6	1-4	East	1.90	12.04	1.02	0%	6.35	250.30
7	1-4	East/West	1.90	25.78	0.94	0%	13.59	225.07
8	1-4	West	1.90	27.08	0.97	0%	14.27	233.37
9	1-4	West	1.90	21.54	0.97	0%	11.35	235.68
10	1-4	West	1.90	20.38	1.02	0%	10.74	251.48
11	1-4	West	1.90	16.89	1.03	0%	8.90	254.74
12	1	West	0.15	1.82	0.97	0%	12.23	18.32
Total			20.09	232.52	1.00	0%	11.58	2,571.43

13.4 MINING RELATED REQUIREMENTS

Mining operations for the PLL project site are based on providing 1,900,000 tonnes of ROM ore to the concentrator from the three pits within the project boundary and disposing of waste material (non-ore rock, saprolite, and soils) in the Waste Rock Storage Area, Future Waste Rock Storage Area, Topsoil Storage Area, East Pit backfill and South Pit backfill. Final estimates for fleet and mine costs were generated from the production schedule.

13.5 REQUIRED EQUIPMENT AND PERSONNEL

Mine plans with ROM production tonnages, waste rock tonnages and roadway profiles were supplied by MM&A to Metso, Continental Conveyor, Komatsu, Deere/Hitachi, Cat®, Furukawa Rock Drills, Contract Mine Service Companies, Nelson Brothers, LLC, and Austin Powder Company, for evaluation of fleet sizing and utilization. Fleet recommendations were very similar amongst the independent vendors, providing good confidence in the estimates. Based on the recommendations, mine scheduling and cost modelling assumes the following basic fleet: four 12.3-m³ (16-yd³) front-end loaders for waste; two 6.1-m³ (8-yd³) front-end loader for ore; four Metso LT150E mobile jaw crushers for waste and two Metso LT130E mobile jaw crushers for ore and fixed and mobile conveyors. Support equipment includes two waste dozers, a water truck, a motor grader, light plants, 6 mobile rock breakers and other utility equipment (see Table 13-4).

Komatsu, Deere/Hitachi and Cat® provided recommendations for loaders, trucks, dozers, rock breakers, and

Komatsu, Deere/Caterpillar and Cat provided recommendations for loaders, trucks, dozers, rock breakers, and support equipment. Komatsu and Cat® provided prices for various options for fleet acquisition, including options to purchase, finance through manufacturer, and lease through independent leasing companies. Contract mine services contractor prices were used for mobile equipment cost estimates, labor costs, and equipment operating costs for this study.

Drilling and Blasting estimates were provided by Austin Powder Company, Nelson Brothers, LLC, Contract Mine Services Contractors and Tri-State Drilling and Blasting. Austin Powder Company and Nelson Brothers, LLC supplied estimates and prices per ton of shot services and unit prices of blasting products for internal blaster use. Tri-State Drilling and Blasting provided prices for contract drilling services. Contract Mine Service Companies supplied a variety of pricing from individual components to complete drilling and blasting inclusive prices. Contract mine services contractor pricing was used for drilling and blasting estimates for this feasibility study.

MM&A solicited Request for Prices for Mine Contractor Services from seven independent contractors and received prices back from four contractors for this feasibility level layout of the pits, dumps, and haul roads. Ultimate pits and fills are designed with ramps incorporated and tonnage estimates for the yearly breakdowns. The purpose of this project is to obtain prices for mine contractor services for moving process material from the pits to feed the concentrate plant and waste material from the pits to the disposal areas and all associated work. This work must be performed in accordance with United States Mine Safety and Health Administration policy and Piedmont Lithium Carolinas, Inc. safety rules.

Requirements for the Mine Services Contractors included:

- No haul trucks can be used for transportation of process material or waste material from the pits to either the concentrate plant ROM pile nor the waste rock storage areas. In pit crushing and conveying must be used for material movements;
- In pit crushers and conveyors shall be mobile and powered by electric motors;
- Loaders feeding the crushers are preferably battery or electric but can be diesel powered;

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- Drills must be down hole hammer type and can be diesel powered;
- Dozers can be diesel powered;
- Loader feeding the concentrate plant can be diesel powered;
- Rockbreakers can be diesel powered.

Included are support equipment in contract mine services costs that may include a water truck, dozer capable of maintaining the waste disposal volumes, motor grader, utility loader backhoe for water lines and plant cleanup, fixed or portable lights, two pumps with 2000 gpm at 800 feet vertical head, and a utility articulated haul truck (for shot stemming, erosion control measures cleaning, etc.).

Table 13-4: Mobile Equipment Fleet

No.	Category	Size	Description
2	LT130E Crusher	39x51	Ore (14")
4	LT150E Crusher	47x55	Waste (14")
18	Lokolink conveyor	22.8 m (75 Ft)	Mobile Conveyor
3	Front Wheel Loader	6.1 m ³ (8 yd ³)	2 Ore Loaders 1 ROM Loader
4	Front Wheel Loader	12.3 m ³ (16 yd ³)	Waste Loader
1	Articulated Haul Truck	36 tonne (40 ton)	Blast stemming / Utility
2	Dozer	150,000 lb Class	Waste
6	Mobile Rock Breaker	12,000 lb Class	Ore / Waste
1	Motor Grader	4.3 m (14 Ft)	Utility
1	Water Truck	8,000 Gallon	Utility
1	Fuel Truck	2,000 Gallon	Utility
2	Dewatering Pump	800 gpm @ 700' Head	Pit Dewatering
1	Dewatering Lines, Fittings	10" HDPE IPS SDR-11	Pit Dewatering
8	Light Plants	4 Head Each	Ore/Waste
1	Mechanic Truck	1.8 tonne (2 Ton)	Autocrane, Compressor
1	Welding Truck	0.91 tonne (1 Ton)	Welder, Compressor
2	Pickup	0.45 tonne (1/2 Ton)	Foreman, Electrician
1	Backhoe/Loader	0.75 m ³ (1cyd)	Utility
3	Magazine	7 X 7 X 30 Ft	Utility
6	DHD Drills	5-1/2 inch	Ore/Waste

MM&A solicited bid prices for Initial Site Development from seventeen independent contractors and received prices back from four contractors for this feasibility study (see Table 13-5). The purpose of this solicitation is to collect pricing for construction of initial site development erosion control measures and grading according to the NC DEMLR mine permit. This work will include clearing and grubbing, construction of screening berms, construction of sound walls, E&S for the Waste Rock Pile, E&S for the Topsoil Storage Pile, E&S for the pit areas, E&S and grading for the plant area, E&S and grading for the magazine area, E&S for the maintenance area, E&S

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and grading for the emulsion storage and bulk truck parking area, E&S and grading for the internal roads and vegetation for stabilized areas.

Table 13-5: Initial Site Development Cost Summary

Group	Totals
Mobilization	\$1,870,000.00
Main Haul Road Construction	\$21,402,300.00
Topsoil Storage Pile Erosion Control	\$372,205.00
East Pit Haul Road Construction	\$89,077.00
East Pit Overburden Removal	\$33,524,812.95
Waste Rock Pile E&S	\$4,608,150.00
Plant Area Grading	\$10,073,641.00
South Pit Haul Road	\$4,550,128.00
South Pit Conveyor access	\$202,472.00
South Pit Overburden removal	\$8,855,307.55
Magazine Construction	\$462,067.00
North Pit Haul Road Construction	\$2,158,537.00
North Pit Conveyor access	\$159,956.00
Emulsion plant grading	\$1,487,566.00
Fencing	\$2,242,930.00
50 feet vegetation buffer planting	\$39,000.00
Demobilization	\$1,655,000.00
Total	\$93,753,149.50

13.6 MINE INFRASTRUCTURE

MM&A prepared a site plan which includes property boundaries supplied by PLL; offset boundaries for intended use as required by North Carolina Department of Energy, Mineral, and Land Resources (*NCDEMLR*) and Gaston County; floodplains, wetlands, and streams as delineated by HDR; concentrator facilities designed by Primero; waste rock disposal areas; and planned pit areas.

13.6.1 Concentrator Pad Design

The concentrator layout was provided by Primero. The plant pad design contains both the concentrator and a ROM storage pad, while conforming to Gaston County setback distances and NCDEMLR erosion control requirements (Figure 13-4).

13.6.2 Internal Roads

MM&A completed design of internal roads capable of handling ore conveyors, waste conveyors, maintenance access roads, as well as the associated erosion control structures. Mine roads provide access to the various pits and waste disposal areas within the project site and provide connection to off-site transportation routes (Figure 13-4). Roadways were designed to be 30 meters wide, including runoff ditches and safety berms where required by MSHA.



Figure 13-3 - Plant Pad Design Including Concentrator and ROM pad



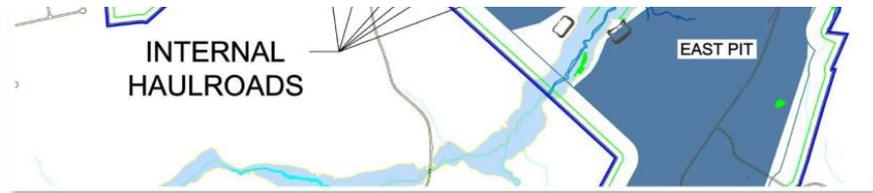


Figure 13-4 - Internal Haulage Road Network

13.6.3 Magazine Grading Plan

Magazine supply and pricing for the project was supplied by Ideal Blasting Supply Company in Asheville, North Carolina. Grading for the magazine pad and surrounding berms with associated erosion control structures are illustrated in Figure 13-5.

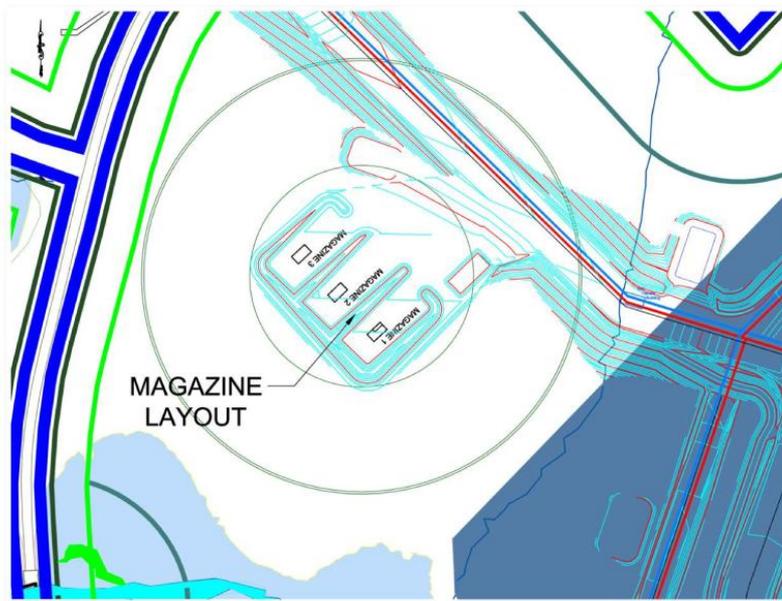


Figure 13-5 - Explosives Magazine Grading Plan

13.7 MINE PLAN

Mine plans were created for multiple years based on nested pits created from initial optimizations in order to create route profiles for equipment sizing and scheduling. These plans were used by MM&A to match production requirements by year to front end loaders, mobile crushers and fixed and mobile conveyors which ultimately resulted in preparing cost analysis data used in mining cost modeling.

Yearly plans incorporated ore production to the concentrator, waste production to on-site waste dumps, and the associated conveyor lines for each destination. Ore production was primarily dictated by plant rom feed requirements and secondarily dictated by pit size and scheduling of exhausted pits for waste backfill. Some scheduling of extracting ore simultaneously from multiple pits was necessary due to smaller pits not being capable of ramp widths and vertical advancement rates to adequately supply the full plant feed requirements. An example conveyor profile is represented in Figure 13-6.

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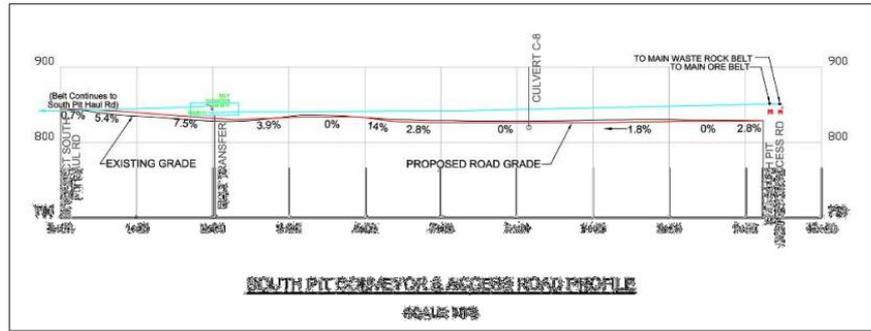


Figure 13-6 - Mine Conveyor Profile

14 PROCESSING AND RECOVERY METHODS

The concentrator is designed to produce saleable spodumene concentrate via Dense Media Separation (DMS) and flotation. The spodumene concentrate produced is then transported to the lithium hydroxide conversion facility to produce battery and technical grade lithium hydroxide monohydrate.

Figure 14-1 is a simplified process flow sheet which summarizes the process flow routings within the major circuits of the processing plant.

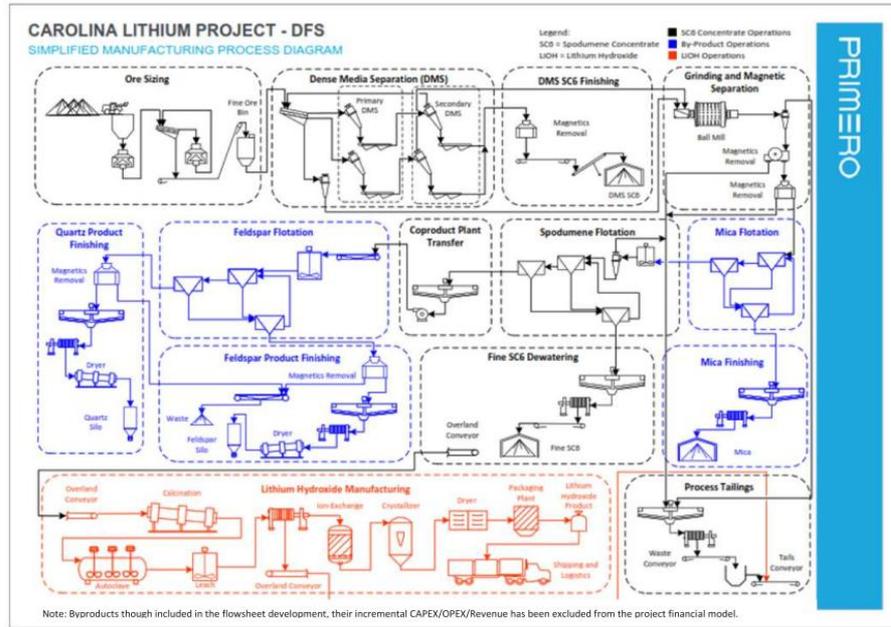


Figure 14-1 - Simplified Flow Sheet for Piedmont Carolinas Inc. (prepared by Primero, 2021)

14.1 CONCENTRATOR

The concentrator consists of two process plants due to layout and location: spodumene and by-products plant. The key process areas of the concentrator are listed as the following:

- Secondary and tertiary crushing
- Spodumene processing plant - Dense Media Separation (DMS) circuit
- Spodumene processing plant - Spodumene DMS concentrate magnetic separation, dewatering, and handling

- Spodumene processing plant - Grinding and desliming
- Spodumene processing plant - Spodumene flotation
- Spodumene processing plant - Spodumene flotation concentrate dewatering and handling
- Spodumene processing plant - Flotation tailings dewatering and handling
- Spodumene processing plant - Process tailings dewatering and handling
- Overland conveying

14.1.1 Coarse Ore Crushing

Run-of-mine (ROM) ore from the open pit mine is crushed by in-pit jaw crushers and is then conveyed to the concentrator site. A front-end loader (FEL) feeds the coarse ore with the top size of < 180 millimeter (mm) to the coarse ore sizing screen, which operates in an open circuit with the secondary cone crusher. The resulting – 60 mm ore is conveyed to tertiary crushing, which consists of a sizing screen in closed circuit with two (2) cone crushers. The resulting fine ore has a top size of < 6.3 mm. A 3,150 metric tonnes (t) live capacity fine ore bin is designed to provide an operating buffer between the crushing and the downstream wet plant.

14.1.2 Spodumene Processing Plant - Dense Media Separation

The DMS plant consists of a two-stage circuit (primary and secondary) for each of the two size fractions (coarse

and fine). Four streams are produced: DMS fine by-pass, DMS spodumene concentrate, DMS middlings, and DMS tailings. The density target of the primary and secondary stage is 2.65 and 2.90, respectively.

The fine ore is conveyed from the fine ore bin to the DMS sizing screen to remove – 1 mm fines. The – 1 mm stream by-passes the DMS and is sent to the grinding circuit. The oversize (-6.3 +1 mm) is fed to the coarse DMS preparation screen to remove the – 2.5 mm portion. The -6.3 +2.5 mm material is fed to the primary coarse DMS circuit. Meanwhile, the -2.5 +1mm materials is sent to a reflux classifier for mica removal. The classifier overflow reports to tailings, and the underflow reports to fine DMS preparation screen. Screen oversize of the fine DMS prep screen is fed to primary fine DMS circuit and screen undersize is recycled as dilution water for the DMS sizing screen.

The oversize of the coarse preparation screen is mixed with ferrosilicon (FeSi) slurry prior to being pumped to the coarse DMS cyclone. The stream is split into sinks (ore specific gravity > 2.65) via the cyclone underflow and floats (ore specific gravity < 2.65) via the cyclone overflow. The resulting slurry is drained and rinsed on linear vibrating screens for FeSi recovery. The coarse primary sinks are then pumped to the secondary stage DMS to be further upgraded. At the same time, the coarse floats are sent to the tailings conveyor for dry waste disposal. The secondary stage DMS follows the same principal; however, the floats of the coarse second stage DMS is re-crushed by a rolls crusher for further liberation and is then recycled back to the DMS sizing screen to recover the liberated spodumene.

The fine DMS circuit is operates the same way as the coarse DMS circuit, but the secondary fine floats is considered DMS middlings. The middling stream is conveyed directed to the ball mill. A provision of a 30-minute middling surge bin between the DMS and ball mill has been made to absorb some mass fluctuations during operation.

The secondary DMS sinks (coarse and fine) are considered spodumene DMS concentrate. This material is transported to magnetic separators for iron removal to produce a 6.0% Li₂O spodumene concentrate. The concentrate is stockpiled in the concentrate shed and is reclaimed by a FEL onto a pocket-style overland conveyor routed to the integrated lithium hydroxide conversion plant for further refining.

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14.1.3 Spodumene Processing Plant - Grinding

The grinding circuit consists of a ball mill working in closed circuit with classification cyclones to produce a product stream with 80% passing (P₈₀) 185 microns (µm). The circuit is fed by the DMS fine by-pass (-1 mm) and the DMS middlings.

The resulting stream is deslimed by cyclones to remove – 20 µm material (slimes) and is then pumped to a low intensity magnetic separator (LIMS) followed by a wet high intensity magnetic separator (WHIMS). The magnetics extracted by both stages are combined and pumped to the process tailing thickener. Meanwhile, the non-magnetic stream is pumped to mica flotation.

14.1.4 Spodumene Processing Plant - Mica Flotation

The non-magnetic stream from grinding is pumped to a flotation feed tank, which serves as surge capacity to absorb some operation instabilities. The slurry is then pumped to the mica flotation conditioning to be conditioned with Armac T/C mixture (mica collector). Sodium hydroxide (NaOH – pH modifier) is also added to maintain the pH at 10. Methyl isobutyl carbinol (MIBC - frother) is used to modify froth properties. The conditioned slurry overflows to a bank of rougher flotation cells. The rougher tailings stream flows by gravity to the scavenger cells to allow additional flotation time to recover the mica. The scavenger tailings stream is pumped to the spodumene flotation circuit. The rougher and scavenger concentrate is pumped to a two (2) staged cleaning circuit for further upgrading and to reduce spodumene losses. Each cleaner tailings stream is recycled to the previous stage. The final mica concentrate will be combined with the flotation tailings for dewatering and disposal.

14.1.5 Spodumene Processing Plant - Spodumene Flotation

The mica scavenger tailings stream is first dewatered by cyclones to reach the percent solids of 67 weight percent (% w/w) prior to high intensity scrubbing. NaOH and F220 (dispersant) are added as attritioning aids. The slurry is subjected to a high-shear environment at the pH of 11 for 10 minutes to clean the spodumene surface before flotation. The scrubbed stream is then pumped to desliming cyclones to remove – 20 µm slimes and the underflow is sent to the spodumene flotation conditioning tanks. The slurry undergoes high intensity conditioning at 67% (w/w) solids with a fatty acid collector (FA-2). Sodium carbonate (Na₂CO₃) is added as a pH modifier to maintain the pH at 8.5. The conditioned slurry overflows to a bank of rougher flotation cells. The rougher tailings flow by gravity to the scavenger cells to allow additional flotation time to recover the spodumene. The scavenger tailings to pumped to the flotation tailings thickener. The rougher and scavenger concentrate is pumped to a three (3) staged cleaning circuit for further upgrading. Each cleaner tailings stream is recycled to the previous stage. The first cleaner tailing streams has an option to bypass to the flotation tailings thickener. The final spodumene concentrate is sent to spodumene concentrate dewatering and handling.

14.1.6 Spodumene Processing Plant - Spodumene Flotation Concentrate Dewatering and Handling

The spodumene flotation concentrate is thickened to 55% (w/w) solids in a high-rate thickener with the aid of an anionic flocculant. The underflow is then pumped to the filter feed tank. The purpose of the feed tank is to serve as a buffer between the upstream process and the downstream filtration. A plate and frame filter is used to form concentrate filter cakes with 12% (w/w) moisture. The cake is the stored in the concentrate shed prior to being reclaimed by a FEL onto a pocket-style overland conveyor routed to the integrated lithium hydroxide conversion plant for further refining.

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14.1.7 Spodumene Processing Plant - Flotation Tailings Dewatering and Handling

The spodumene flotation tailings is thickened to 55% (w/w) solids in a high-rate thickener with the aid of an anionic flocculant. The underflow is then pumped to the filter feed tank. The purpose of the feed tank is to serve as a buffer between the upstream process and the downstream filtration. A belt filter produces the tailings filter cake with 15% (w/w) moisture. The cake is discharged onto a reversible conveyor with options to be fed to the by-products plant or directly to the tailings conveyor for disposal.

14.1.8 Spodumene Processing Plant - Tailings Dewatering and Handling

The DMS effluent clarifier receives and thickens the streams from the up-flow classifier, slimes, and DMS grits to 40% (w/w) solids with the aid of the anionic flocculant. The underflow is then pumped to the process tailings thickener for further thickening.

The process tailings thickener receives streams from desliming cyclones, magnetics, and DMS clarifier underflow stream. The slurry is thickened to 55% (w/w) solids. The underflow is then pumped to the filter feed tank. The purpose of the feed tank is to serve as a buffer between the upstream and the downstream filtration. A plate and frame filter press is used to form concentrate filter cakes with 15% (w/w) moisture. The filtered tailings is deposited on to the tailings conveyor along with the coarse DMS tailings.

The chemical plant produces a filter cake tailings stream consisting of analcime material with 20% (w/w) moisture, which is transported to the tailings conveyor at the concentrator via a pocket-style overland conveyor.

14.1.9 Overland Conveying

A bi-directional pocket-style overland conveyor connects the concentrator and the chemical plant. The overland conveyor carries the chemical plant tailings, mentioned previously, to the concentrator. A series of pulleys are used to unravel of the pocket conveyor and allow the unloading of the tailings material onto the tailings conveyor for disposal. A FEL then reclaims the spodumene concentrates (DMS and flotation), stored in the concentrate shed, into a bin. A belt feeder is used to control the feed rate into the unravelled overland conveyor. The conveyor folds back into a pocket-style using pulleys and transports the concentrate to the chemical plant for further processing.

14.2 LITHIUM HYDROXIDE CONVERSION PLANT DESCRIPTION

The lithium chemical conversion plant, uses the Metso:Outotec proprietary technology, by converting the spodumene ($\text{LiAl}(\text{SiO}_3)_2$) into a lithium carbonate form and then into a soluble lithium hydroxide, to allow crystallization to the final lithium hydroxide monohydrate product. The solutions generated within the circuit are recirculated as much as possible to maintain lithium concentrations, recover as much lithium as possible, and reduce water requirements.

The key process areas for the lithium conversion plant are listed as the following:

- Spodumene Concentrate Storage and Transfer;
- Calcination;
- Grinding and Pulping;
- Carbonate Leaching – High Pressure and Atmospheric;
- Conversion (carbonate to hydroxide);

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- Lithium Hydroxide Crystallization and Product Drier;
- Product Bagging Facility.

The high-level process flow is summarized in Figure 14-2.

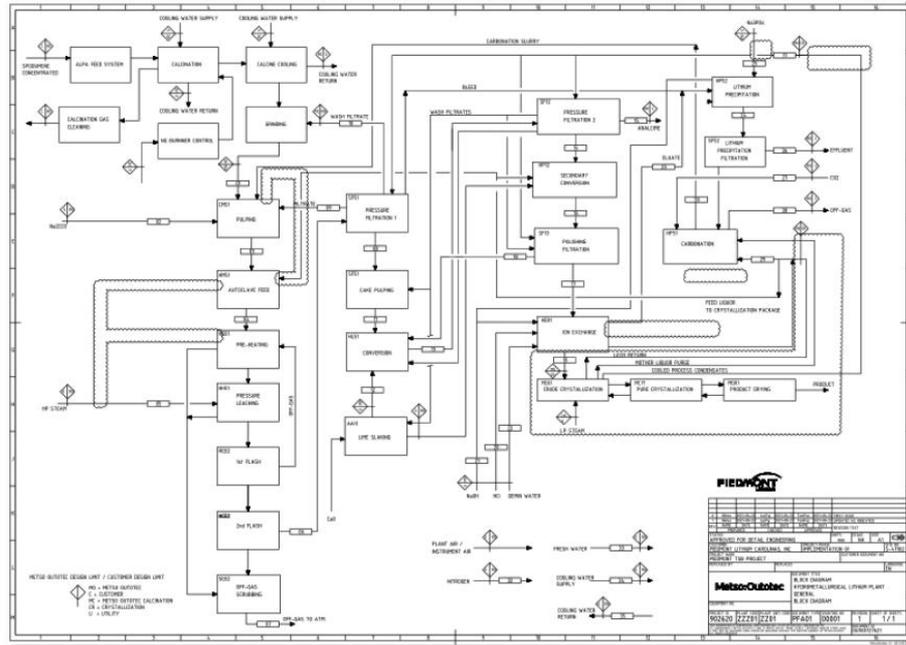


Figure 14-2 - Chemical Conversion Plant - High Level (M:O) Summary

14.2.1 Spodumene Concentrate Storage and Transfer

The stockpiled spodumene concentrate is transported from the concentrate plant to the conversion plant, where it is fed directly into the convertor feed system, or in emergency, to ground. A front-end loader (FEL) compliments the feed requirements to reclaim stockpiled concentrate. The material is then conveyed to the calciner.

The transportation options are primarily via an overland conveyor system nominally 8,000 ft long, or via trucks if the overland conveyor is down for extended periods.

14.2.2 Calcination and Pulping circuit

The material is then calcined at 1,050°C, via a direct fired horizontal rotating kiln, with the calcined material being cooled using an indirect rotating kiln. This converts the spodumene from an alpha form to a beta form, which



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improves the ores leachability. The cooled calcine is then wet ground in a conventional ball mill circuit and pulped in a sodium carbonate rich liquor. A storage bin (for calcine product) provides a buffer between circuits for a couple of hours, to maintain circuit stability.

Circulating streams; filtrate and wash filtrate from the 1st stage slurry filtration circuit are combined with the calcined solids to generate a slurry of nominally 50-70% solids. Additional solution is added, at the grinding product screen as necessary to achieve a 25-30% (w/w) slurry for feeding the autoclaves.

Solid sodium carbonate feed rate into the circuit is adjusted to maintain a mass ratio with the beta-spodumene mass flow from the grinding circuit, as determined by the operations team.

The slurry is stored in a surge tank where it is then pumped into the pressure autoclave circuit.

14.2.3 Carbonate Leaching – High Pressure and Atmospheric

The lithium leaching occurs concurrently with excess Na_2CO_3 forming a Li_2CO_3 precipitate. This is achieved by heating the slurry to $>200^\circ\text{C}$ ($>392^\circ\text{F}$) via a pressure autoclave. A heat recovery system to reduce energy demand and manage the off-gas scrubbing is included in the design.

The slurry from the pulping circuit is fed through the heat recovery circuit where the high pressure flashed steam contacts with the feed to heat the slurry to $>150^\circ\text{C}$. The heated slurry is pumped to the autoclave using positive

displacement pumps.

Circulating streams; in addition to the filtrate liquors, the other circulating stream is the mother liquor (ML) from the LiOH crystallization circuit. The B-spodumene leaching in the autoclave, occurs using the 5-chamber unit, which are mechanically agitated with a weir arrangement in place to allow slurry to flow either under or over the weirs. The circuit operates at a $>392^{\circ}\text{F}$ $>200^{\circ}\text{C}$ with an operating pressure of $>290\text{PSI}$ >20 barg. The temperature is controlled by direct injection of high-pressure steam.

The autoclave discharge is released via a series of pressure reduction steps; the flashing system (heat recovery system) recovers a large portion of the heat used to maintain temperature at $>200^{\circ}\text{C}$ (292°F) and drops the pressure down to atmospheric nominally 14 PSI, which achieves a nominal temperature of 100°C (212°F).

The slurry is then pumped to the filter feed cooling reactor where air and cooling water is utilized to reduce the slurry temperature to a nominal 176°F (80°C).

14.2.4 Off Gas Scrubbing

The gas/vapor from the slurry depressurization stages are collected and treated via a venturi gas scrubber. The venturi scrubber recovers any solids carry-over that occurs in the off gas, by spray water contact. The spray is generated via nozzle sprays and a circulating pump. The spray water reports to the internal water reservoir, where the "slurry" is bled to the filter area and used for cake washing which helps maintain solids load, and salt content. The scrubbed gas/vapor is released to the atmosphere.

14.2.5 Soda Leach Residue Filtration

The cooled autoclave discharge slurry is then filtered to recover the solution, which is circulated back to the mill circuit, to reduce the water demand and recycle the excess Na_2CO_3 .



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The filtration circuit with a horizontal plate and frame units include filtration, cake wash, pressing and air drying, cake release, and cloth washing stages, which takes a nominal 15-minute cycle. To ensure good washing efficiency and to minimize lithium carbonate solubility, the wash is undertaken at 176°F (80°C). Fresh water, if used, will be heated to the target temperature. Wash filtrate is distributed back into the circuit, primarily to the calcine grinding and pulping process steps.

A bleed to effluent is applied to maintain soluble chloride concentrations and impurity levels in the process streams.

The washed filter cake which is predominantly $\text{NaAlSi}_2\text{O}_6 \cdot \text{H}_2\text{O}$ (analcime), Li_2CO_3 (lithium carbonate), SiO_2 (quartz), and gangue minerals, is typically 80% (w/w) solids.

14.2.6 Conversion (Carbonate to Hydroxide)

The filter cake generated is then repulped with recirculated lean LiOH solution, leach residue filtrate, wash waters, and added calcium hydroxide ($\text{Ca}(\text{OH})_2$) to convert the lithium carbonate (Li_2CO_3) to soluble lithium hydroxide (LiOH), summarized as the Conversion Stage. The calcium hydroxide is fed at a ratio correlated to the filter cake mass, with the reaction taking place at a nominal 104°F (40°C). The slurry is then filtered, using pressure plate frame filters, with the various filtrates and wash filtrates being separately captured and pumped to the appropriate process steps.

The Li rich hydroxide mother liquor recovered is pumped to the secondary conversion circuit, under a nitrogen rich blanket. The wash filtrates are split between the conversion circuit and calcium hydroxide slurry (milk of lime) preparation respectively. The washed solids (analcime) report to the tailings discharge conveyor, at a nominal moisture of $<20\%$ (w/w).

The ML is purified through a series of filters and ion exchange units as detailed in the next section.

A circulating stream from the crystallization circuit is fed back into the conversion circuit to maintain the water balance and provide an impurity bleed for the crystallizer. If the crystallization ML bleed impacts solution chemistry of the conversion circuit, then the effluent bleed is increased to maintain the solution chemistry.

The final discharge from the conversion plant includes the filtered washed solid residue which contains nominally 20-30% water, which is referred to as analcime. This solid is conveyed and transferred onto an overland conveyor, with the option to divert to tailings stockpile where it is then loaded onto a truck and backhauled to the concentrator.

14.2.7 Polishing Filtration and Ion Exchange

The LiOH ML is fed through a polishing filtration (2-stage) process where suspended solids are removed from the lithium hydroxide solution prior to ion exchange processing. The polishing filtration units operate in series with a plate frame filter in the first filtration step and a LSF filter; with a filtering cycle consisting for each stage of:

- Filling and filtration;
- 1st pressing;
- Cake wash;
- 2nd pressing;
- Air dry, cake release;

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- Cloth washing.

The nominal circuit cycle time is 105 minutes, with the filter cake being discharged into a pulper unit, which uses cloth and cake wash process water. The solution is then fed to the second filtration unit, which operates for a nominal 30-35 h depending on contained solids concentration in the feed.

The LSF filter circuit operates with the feed being run in recirculation until sufficient filtrate clarity is achieved. Once clear, the filtrate is diverted to the IX feed tank, for batch processing through the IX circuit. The cake formed in the filter unit is then removed via a wash sequence cycle with the sludge and cloth wash solution being fed back to the conversion reactors.

The filtrate in the IX feed tank is pumped through a series of fixed bed columns, run in a load, wash and regeneration cycle. The resin used is selective for multivalent cations.

14.2.8 Lithium Hydroxide Crystallization and Product Drying

The “clean ML” is then crystallized to produce a 99.0% lithium hydroxide monohydrate (LiOH·H₂O) product, and dried in a CO₂ lean environment, refer to Figure 14-3. The crystallizing circuit includes an evaporator, with a two-stage crystallization process. Separation between each stage is achieved via a centrifuge prior to repulping or feeding to the drier unit for the consecutive crystallization stages respectively.

During the process, controlling the solution chemistry in the various liquor streams by using saturation limits of the various constituents, allows impurities to be precipitated. These solids are then removed via a series of filters and sent back to the conversion circuit where any associated lithium is recovered.

The final crystallization product is centrifuged and then fed into a drier unit, which includes a cooling stage to bring the product to a temperature of nominally 40°C, prior to pneumatic transport to the bagging plant storage facility.

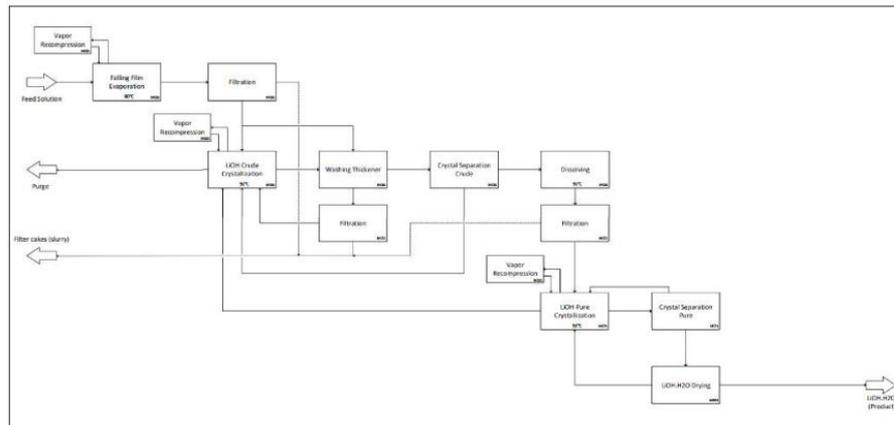


Figure 14-3 – Crystallizer Circuit Summary Flowsheet

14.2.9 Product Bagging Facility

The product is stored in a series of silos under an inert atmosphere (N₂ or CO₂ free air, heated). The bagging facility is proposed to operate during dayshift only. The silos are filled with screened material which is pneumatically transferred after discharged from the drier units. The screening unit separates the coarse and ultra-fines which are pulped and returned to the crystallization circuit for reprocessing.

The screened mid-range material is then pneumatic transferred to the storage silos. During packing, the at size material is run through a magnetic field to remove any magnetic impurities, and subsamples are taken prior to being bagged at a predetermined weight for sale. The bags are then sealed, wrapped in plastic, and then stored. The bag(s) are allocated a Lot number and identifier, so that analysis of subsamples can be issued with each Lot/bag, to meet the QAQC requirements.

14.3 CONCENTRATOR

14.3.1 Key Process Design Criteria

The concentrator is designed to nominally process 1,897,500 metric tonnes per year (tpy). The plant feed is based on MM&A's mine block model with 10% dilution. It is important to note that the feed grade considers only the lithia found in recoverable pegmatite. An average of 77% lithium recovery (based on recoverable lithia units) is used for this design.

These figures are based on the applicable results of the test work completed to date. The design criteria will progress as the new test work data becomes available. The key design criteria are given in

Table 14-1.

Table 14-1 – Concentrate Key Design Criteria

Parameter	Units	Nominal	Design
Plant throughput	dry t/y	1,897,500	2,340,000
Spodumene ore grade (no dilution)	% Li ₂ O	1.1	
Spodumene ore grade (incl. dilution)	% Li ₂ O	1.0	
Ore moisture	% w/w	6.0	
Mine dilution	% w/w	10.0	
Life-of-Mine	years	10.6	
Operating days per year	days	365	
Operating days per week	days	7	
Operating shifts per day	#	2	
Operating hours per shift	h	12	

Parameter	Units	Nominal	Design
Total operating hours	h/y	8,760	
Processing Plant Production Summary			
Spodumene concentrate Li ₂ O grade	% Li ₂ O	6.0	
Spodumene concentrate Fe ₂ O ₃ grade	% Fe ₂ O ₃	1.0	
Estimated spodumene recovery, concentrator	%	77.0	
Spodumene concentrate production	dry t/y	242,669	299,260
Availability			
Crushing plant availability	%	75	
Crusher operating hours	h/y	6,570	
DMS plant availability	%	85	
DMS operating hours	h/y	7,446	
Flotation plant availability	%	85	

Flotation operating hours	h/y	7,446	
Ore Characteristic			
Benchmarked crushing work index (CWi)	kWh/t	16.50	18.00
Abrasion index (Ai)	kWh/t	0.47	0.51
Bond ball mill work index (BBWi)	kWh/t	12.00	13.20
Crushing Plant			
Crushing plant throughput	dry t/d	5,199	6,411
Feed size F100	mm	179.0	
Feed size F80	mm	82.0	
Product size F100	mm	6.4	
Product size F80	mm	3.9	
Dense Media Separation (DMS)			
Fine ore storage bin residence time	hours	12	10
DMS plant throughput	dry t/d	5,199	6,411
Feed coarse fraction (-6.3 +2.5 mm) (% of wet plant feed)	%	42.3	
Feed fine fraction (-2.5 +1mm) (% of wet plant feed)	%	27.5	

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Parameter	Units	Nominal	Design
Feed fine by-pass (- 1 mm) (% of wet plant feed)	%	30.3	
Up-flow classifier mass rejection (% of DMS plant feed)	%	0.7	
Primary DMS target SG	-	2.65	
Primary DMS minimum medium to ore ratio	-	7.50	
Secondary DMS target SG	-	2.90	
Secondary DMS minimum medium to ore ratio	-	15.00	
Magnetic separation - magnetic field intensity	gauss	8,000	
Estimated DMS spodumene recovery (including losses to by-pass)	%	34.2	
Total DMS spodumene concentrate production	dry t/d	295	364
Grinding			
Grinding circuit fresh feed	dry t/d	2,869	3,538
Circulating load (% of fresh feed)	%	250	
Feed size F ₁₀₀	µm	2,500	
Feed size F ₈₀	µm	1,820	
Product size F ₁₀₀	µm	300	
Product size F ₈₀	µm	185	
LIMS magnetic field intensity	gauss	5,000	
WHIMS magnetic field intensity	gauss	10,000	
Mica Flotation			
Mica flotation feed	dry t/d	2,524	3,112
Mica flotation conditioning time	min	10	
Mica flotation circuit configuration	-	Rougher and Scavenger + 2 stages of cleaning	
Mica concentrate mass recovery (% of wet plant feed)	%	1.5	
Mica concentrate production	dry t/d	78	96
Spodumene Flotation			
Spodumene flotation feed	dry t/d	2,359	2,909
Spodumene flotation conditioning time	min	20	

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Parameter	Units	Nominal	Design
Spodumene flotation circuit configuration	-	Rougher and Scavenger + 3 stages of cleaning	
Spodumene flot. concentrate mass recovery (% of wet plant feed)	%	7.1	
Estimated flotation spodumene recovery	%	42.8	
Spodumene concentrate production	dry t/d	370	456

14.3.2 Tonnage Basis

All tonnages quoted are metric units and are for dry solid materials unless otherwise noted.

14.3.3 Mass Balance

The process plant mass balance is summarized in Figure 14-4 and is based on the key design criteria above and the process flow sheet. Throughput in Figure 14-4 are shown in metric tonnes per day (t/d).

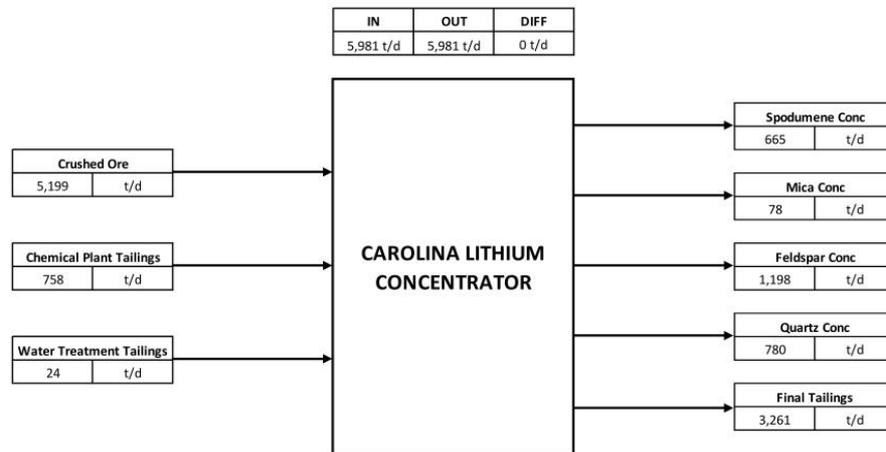


Figure 14-4 – Concentrator Global Mass Balance

14.3.4 Water Balance

The process plant water balance is summarized in Figure 14-5 and is based on the key design criteria above and the process flow sheet. Flowrates in Figure 14-5 are shown in meters cubed per day (m³/d).

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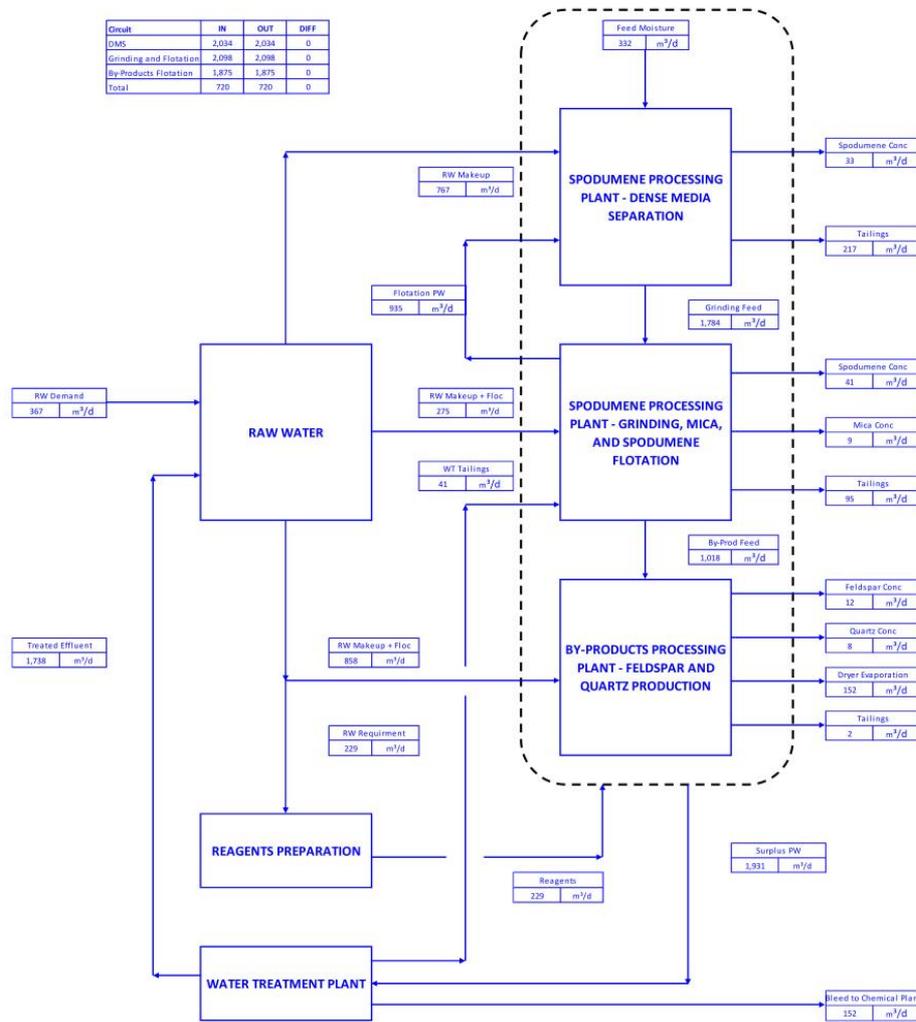


Figure 14-5 – Concentrator Global Water Balance

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14.3.5 Reagents and Consumables

Table 14-2 presents the reagents and consumables required by the concentrator.

Table 14-2 – Reagent and Consumables Summary

Operation	Consumable	Usage	Delivery Form	Distribution Method
DMS	Ferrosilicon (FeSi)	Dense media	Super sac	Bag breaker and mixing hopper
Grinding	Ball media	Grinding media	Drum or super sac	Overhead crane and ball mill kibble feeder
Mica Flotation	Tallow alkyl amine Acetate (Armac T) and Coco amine Acetate (Armac C)	Mica collector	Bulk delivery	Dilute with raw water and distribute
	Methyl Isobutyl Carbinol (MIBC)	Frother	Drum - delivered at strength	Direct dosage
	Sodium Hydroxide (NaOH)	pH modifier	Bulk - delivered at strength	Direct dosage
High Intensity Scrubbing and Declining	F220	Dispersant	Bulk delivery	Dilute with raw water and distribute

	Sodium Hydroxide (NaOH)	pH modifier	Bulk - delivered at strength	Direct dosage
Spodumene Flotation	FA-2	Spodumene collector	Bulk delivery	Direct dosage
	Sodium Carbonate (Na ₂ CO ₃)	pH modifier	Super sac	Dilute with raw water and distribute
Thickening and Dewatering	Magnafloc 10	Anionic flocculant	Super sac	Dilute with raw and process water
Water Treatment Plant	Lime (Milk of Lime)	Precipitation reagent	Bulk delivery from chemical plant at strength	Direct dosage
	Coconut shell carbon	Adsorption media	Super sac	Hoist and bag breaker for each change out

Reagent mixing will be completed in a designated area within the plant. The design of this area includes features such as bunding, with dedicated sump pumps. The layout and general arrangement of the reagent area account for the need to prevent contact of incompatible reagent types. Separate onsite long-term reagent supply storage is provided a safe distance away from the process plant.

14.3.6 Utilities

Raw Water

Raw water is sourced from well drilled on site or pit dewatering. This is also supplemented by treated water from the water treatment plant.

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The raw water system includes a raw water tank and distribution pumps to deliver an estimated nominal flowrate of 2,106 m³/d to the concentrator. Raw water is used for process makeup, gland seal water, reagent preparation, filter cake wash, and fire protection.

Process Water

The concentrator process water distribution consists of three (3) independent circuits to minimize reagent cross contamination, mainly fatty acid (FA-2) and hydrofluoric acid (HF). The process water circuits are as the following:

- DMS Process Water - Provides process water to the DMS circuit. Water is recovered from thickener overflows with raw water as makeup, the estimated nominal flowrate is 29,758 m³/d.
- Flotation Process Water Tank – Provides process water to grinding, mica, and spodumene flotation. Water is recovered from thickener overflows, the estimated nominal flowrate is 26,720 m³/d with a surplus of water at 1,645m³/d, which is filtered and then recycled as flotation gland seal water. Any additional grey water discharge is directed to the water treatment plant and to be recycled as “raw” water post treatment.
- By-products Process Water Tank - Provides process water to by-products flotation. Water is recovered from thickener overflows, the estimated nominal flowrate is 10,161 m³/d with a surplus of water at 1,517 m³/d, which is directed to the water treatment plant and to be recycled as “raw” water post treatment.

Water Treatment

A water treatment facility receives the surplus process water from the flotation and by-products process water circuits. The grey water is treated via a series of precipitation tanks, dissolved air flotation (DAF), and carbon adsorption to reduce impurities. The treated effluent is recycled to the concentrator as “raw” water. Water treatment sludge is thickened, filtered, and disposed onto the tailings conveyor. A process water bleed post treatment of 152 m³/d is estimated to prevent impurity build up. The bleed stream is pumped to the chemical plant and serves as raw water makeup.

The spodumene concentrate produced from the concentrator is delivered via truck to the integrated conversion plant for battery grade lithium hydroxide production.

The lithium hydroxide plant is based on Metso:Outotec’s proprietary technologies to produce 30,000 tpy of battery grade lithium hydroxide monohydrate.

14.4 LITHIUM HYDROXYDE CONVERSION PLANT

14.4.1 Key Process Design Criteria

The chemical plant is designed to nominally process 195,000 metric tonnes per year of spodumene feed from the concentrator. The key design criteria of the lithium hydroxide conversion plant are presented in Table 14-3. These figures are based on information provided by Metso:Outotec to date.

Table 14-3 – Chemical Plant Basis of Design

Parameter	Units	Value
Plant throughput	dry tpy	195,000
Operating days per year	days	365

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Parameter	Units	Value
Operating days per week	days	7
Operating shifts per day	#	2
Operating hours per shift	h	12
Total operating hours	h/y	8,760
Project life	years	20
Availability		
Calcination plant availability	%	85.6
Calciner operating hours	h/y	7,500
Hydrometallurgical & crystallization plant availability	%	85.6
Hydrometallurgical & crystallization operating hours	h/y	7,500
Chemical Conversion Plant Production Summary		
Feed Li ₂ O grade	% Li ₂ O	6.0
Feed Fe ₂ O ₃ grade	% Fe ₂ O ₃	1.0
Lithium recovery	%	91.0
LiOH·H ₂ O production	tpy	30,000
Final Product LiOH grade	% LiOH	56.5
Final Product LiOH·H ₂ O grade	% LiOH·H ₂ O	99.0
Spodumene Calcination		
Calciner feed	dry t/d	534
Feed moisture	% w/w	7 - 12
Feed particle size P ₈₀	µm	2,023
Calcination temperature	°C	1,050 - 1,100
Calciner residence time	min	110
Concentrate particle size distribution (P ₈₀)	µm	3,000
Required calcination temperature	°C	1,050
Lithium Hydroxide (LiOH) Conversion		
Total LiOH conversion feed	dry t/d	534
Number of circuits in parallel	-	2
Analcime tailings	dry t/d	758

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Parameter	Units	Value
Analcime tailing % moisture	% w/w	20
Nominal liquid effluent discharge	m ³ /d	261
Bagging Plant		
Final production rate	tpy	30,000
Bagging plant operating hours	h/day	10
Bagging plant throughput	t/op h	8.2

14.4.2 Mass Balance

The chemical plant mass balance is summarized in Figure 14-6 and is based on the key design criteria above and the process flow sheet. Throughput in Figure 14-6 are shown in in metric tonnes per day (t/d).

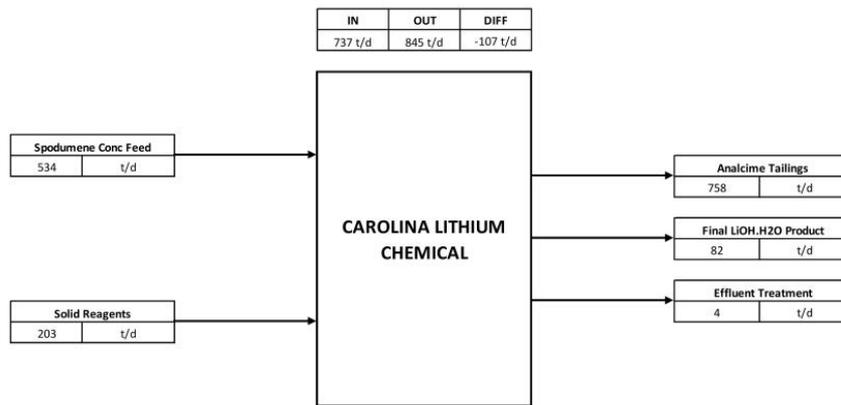


Figure 14-6 - Conversion Plant Global Mass Balance

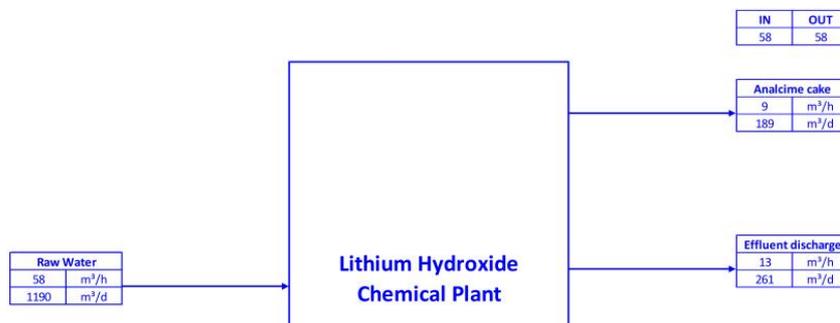
14.4.3 Water Balance

The chemical plant mass balance is summarized in Figure 14-7 and is based on the key design criteria above and the process flow sheet. Throughput in Figure 14-7 are shown in meters cubed per day (m³/d).

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There is significant internal water recirculation to minimize water makeup requirements and lithium losses. An effluent treatment is designed to treat the circulated water with sodium phosphate (Na₂PO₄) to reduce soluble lithium concentrations.

Additional evaporative losses from cooling towers are estimated at 740 m³/d. Further refinement is required in detailed design to determine seasonal evaporative losses and plant water demand.



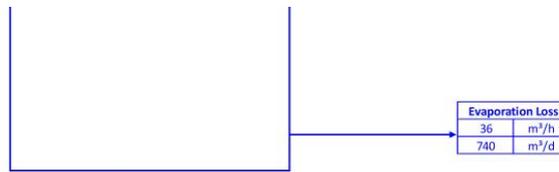


Figure 14-7 – Conversion Plant Global Water Balance

14.4.4 Reagents and Consumables

14.4.4.1.1 Calcium Hydroxide

The bulk delivery will be via truck during phase 1, and rail during phase 2. For rail delivery, a spur arrangement will be in place to store the loaded and empty carriages with offloading being undertaken on a daily to triweekly frequency. The operations team will shunt the necessary carriages to the respective offloading area.

Throughout Phase 1, the lime will be pneumatically transferred to the storage silo. For phase 2, the bulk delivery will be dropped into a train unloading hopper, where the lime is fed from a screw feeder to a belt conveyor situated in an underground bunker. The belt conveyor distributes the off-loaded lime to a bucket elevator which then feeds directly into a silo. The dry powder is then screw fed to the attrition mill/mixer. Water and lime are mixed in ratio to maintain operating temperatures and to produce a 20% (w/w) product, which then gravitates to the lime storage tank. During bucket elevator maintenance and downtime, the hydrated lime is pneumatically transferred to the storage silo.

The storage silo has level monitoring so that delivery schedules can be managed, by providing feedback to the logistics team/suppliers so they can manage their delivery sequences. The lime silo has a storage residence time

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of four days. The four days of storage allows for train shunting and offloading during weekdays to minimize noise emission on weekends.

The storage tank level is maintained by monitoring the tank level and when the level is low enough to hold a mixing batch then a mix will be automatically initiated and managed by the vendor unit. The storage tank has a 36-hour storage capacity, to account for slaker downtime and ensure a consistent mixing schedule. The increased storage capacity enables the 10-hour batch mix to be done during the dayshift only.

The hydrated lime slurry (Milk of Lime - MOL) is distributed by a centrifugal pump via a ring main within the process facility. The MOL dosing rate is managed at the addition location by a flow distribution control valve which is regulated based on an addition ratio to the respective circuit feed.

14.4.4.1.2 Sodium Carbonate

The bulk delivery will be via rail, with trains delivering the material once or twice per week, as necessary. A spur arrangement will be in place to store the loaded and empty carriages with offloading being undertaken on a daily to triweekly frequency. The operations team will shunt the necessary carriages to the respective offloading area.

The bulk delivery will be dropped into a train unloading hopper, where the lime is fed from a screw feeder to a belt conveyor situated in an underground bunker. The belt conveyor distributes the off-loaded soda ash to a bucket elevator which then feeds the diverter chute. The dry powder is either belt conveyed to the pulping tank, via a variable speed unit, for mixing prior to pressure leaching, or fed to the storage silo. A screw feeder recirculates the soda ash from the silo to the bucket elevator to feed the pulping tank.

The storage silo has level monitoring so that delivery schedules can be managed, by providing feedback to the logistics team/suppliers so they can manage their delivery sequences. The four days of storage enables train shunting and offloading during weekdays only to minimize noise emission on weekends.

The storage tank level is maintained by monitoring the tank level and when the level is low enough to hold a mixing batch then a mix will be automatically initiated and managed by the vendor unit.

The soda ash dosing rate is managed at the addition location by a mass distribution screw feeder which is regulated based on an addition ratio to the respective circuit feed.

14.4.4.1.3 Trisodium Phosphate

The bulk solid delivery will be via biweekly truck shipments. The delivery truck's pump will pneumatically transfer the solid sodium phosphate shipment into the storage silo. The phosphate is contacted with water to achieve the desired phosphate solution concentration for precipitating Li in solution.

The phosphate storage silo has level monitoring so that delivery schedules can be managed, by providing feedback to the logistics team/suppliers so they can manage their delivery sequences.

14.4.4.1.4 Hydrochloric Acid

The hydrochloric acid is delivered in bulk and stored on site in a tank with 3.5 days of storage capacity. The 28 m³ tank stores the 33% HCl (2 M) shipped liquid acid. Hydrochloric acid transfer pumps transfer the acid to an inline mixer, where the acid concentration is diluted with fresh water. Dilution of the acid is undertaken to achieve the necessary 7% (2 M) HCl concentration. The diluted acid is stored in a separate tank, which is filled with a 1 hour mix every 12-hour shift.

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The hydrochloric acid storage tank has level monitoring so that delivery schedules can be managed, by providing feedback to the logistics team/suppliers so they can manage their delivery sequences. The diluted acid tank level is maintained by monitoring the tank level and when the level is low enough to hold a mixing batch then a mix will be automatically initiated.

14.4.4.1.5 Sulfuric Acid

The sulfuric acid is delivered as a 92% concentration sulfuric acid in a tote which is stored in the acid area. A drum pump attached to the tote pumped the acid into the sulfuric acid tank, where it is mixed with fresh water to a 10% concentration.

The hydrochloric acid storage tank has level monitoring so that delivery schedules can be managed, by providing feedback to the logistics team/suppliers so they can manage their delivery sequences.

14.4.4.1.6 Caustic (NaOH) circuit

The solution delivery will be via truck shipments. The delivery truck's pump will transfer the solution sodium hydroxide into the storage container, and will be diluted to <30%, to reduce circuit crystallization due to saturation.

The phosphate storage silo has level monitoring so that delivery schedules can be managed, by providing feedback to the logistics team/suppliers so they can manage their delivery sequences.

14.4.5 Utilities

14.4.5.1.1 Nitrogen

The nitrogen supply will be provided by an onsite pressure swing adsorption (PSA) system. The PSA system utilizes gas phase adsorption to separate and recover nitrogen from the air. The PSA has two adsorber vessels, piping and valves to allow for continuous product flow and automatic switching between the carbon molecular sieve beds. Switching is controlled by a proprietary electronic control system.

14.4.5.1.2 Carbon Dioxide

The carbon dioxide is supplied as a liquid via truck shipments. The equipment, maintenance, monitoring, and supply are provided by the vendor of the CO₂ liquid. A remote, solar powered telemetry unit mounted on the storage tank provides the vendor with monitoring capabilities. The vendors continuous, real-time monitoring of product supply will enable optimal refill scheduling and further guarantee a reliable source of supply.

14.4.5.1.3 Natural Gas

Natural gas shall be used as the fuel source for calciner and steam boilers. Natural gas is supplied from the service provider network (Dominion).

14.4.5.1.4 Boiler

The multiple boiler unit(s) will supply the steam necessary to maintain the operating temperatures within the conversion plant. The boiler is fed via a combination of both demineralized water and fresh water to maintain the water feed quality as detailed in the design criteria. The purge, blowdown stream is returned to the water surge tanks for use in the circuit as grinding water make-up water, or for lime slurry make-up.

The plant steam demand is as the following:

- High pressure – 9.8 t/h @ 28 barg (405 PSI);

- Medium pressure – 12.5 t/h @ 10 barg (145 PSI);
- Low pressure – TBC t/h @ 2 barg (30 PSI).

14.4.5.1.5 Potable Water

Potable water will predominantly come from municipal supply, 2-day site storage, with a UV and bacterial treatment occurring onsite to mitigate any water contamination. The potable water is distributed via dedicated pumps located at the potable water storage tanks. Water is distributed to the following areas:

- Safety shower will be distributed on a ring main to minimize water temperature excursions for use across the whole plant specifically; the laboratory area, reagents – acid area, soda ash, hydrated lime, and within the process facility the grinding, autoclave, conversion and IX circuit, crystallization and bagging circuits;
- To all laboratory, ablutions, and administration buildings;
- Heat tracing will be applied where necessary to minimize line freeze.

14.4.5.1.6 Fresh Water

The fresh water is from the municipal supply. The storage tank will be sufficient to hold 48 hours of demand. The tank is filled from the excess water that gravity flows from the fire water tank. Fresh water is distributed as needed to the:

- evaporative cooling system, supplemented with demineralized water to maintain the salt content to <50ppm Cl;
- demineralized circuit;
- reagent/grinding circuit make-up.

14.4.5.1.7 Fire Water

The fire water is from the municipal supply. The storage tank will be sufficient to hold 90 minutes of instantaneous demand, with a 90k gallon capacity. Municipal water supply ensures the fire water tank is constantly filled, where the excess water will gravity flow to the freshwater tank. Due to the stand-alone nature and remoteness of the lithium conversion plant, the following fire provisions are utilized:

- A site wide practical automatic fire detection and alarm system that can convey critical and definitive information to a central location/control room point to allow for rapid emergency response by plant personnel/emergency response team;
- Automatic fire detection/protection systems for critical assets, such as the substations, infrastructure, control facilities, and process equipment;
- Site-wide fire water pumping and reticulation system. The fire main is installed in a ring configuration complete with take-off points to critical areas and sectionalizing valves to allow for part isolation of the fire water main while maintaining coverage to other areas of the site;
- First attack/first aid fire fighting equipment that can be used by the majority of staff to control a fire even in the early stages;
- Safety shower will be distributed on a ring main to minimize water temperature excursions for use across the whole plant specifically; the laboratory area, reagents – acid area, soda ash, hydrated lime, and within the process facility the grinding, autoclave, conversion and IX circuit, crystallization and bagging circuits;
- To all laboratory, ablutions and administration buildings.
- Heat tracing will be applied where necessary to minimize line freeze.

14.4.5.1.8 Demineralized Water

The demineralized water will be fed from the fresh water surge tanks, with supply being provided by the Municipal system. The system is on dedicated standalone skids which are pre-piped and pre-wired containerized systems which includes:

- Multi-media filters (3 units);
- Sodium Bisulfite contact tank;
- Caustic injection system;
- RO – double pass system;
- IX Units.

The final product (Permeate) is transferred to the demineralized water storage tank. The demineralized water is fed to the boiler units for steam production. The solute solution along with any cleaning effluent is transferred to the Grinding / Repulping Surge Tank.

14.4.5.1.9 Gland Water

The gland water is distributed from the freshwater tank, further evaluation during the FEED will be undertaken to confirm if a booster unit is required for the single pump unit that requires gland water.

Gland water flow management at each pump is via a solenoid valve which opens when the request for pump start

stand water flow management at each pump is via a solenoid valve which opens when the request for pump start has been initiated and closes after a set period of time when a pump stop is initiated. Flow to the gland relies on a pre-set maric valve, with an inline strainer installed to minimize suspended solids carry through. A flow switch provides feedback that the system / water flow is functioning within design limits.

14.4.5.1.10 Ablutions

Ablution facilities are in the following areas:

- Laboratory;
- Control Room;
- Shared Plant Area;
- Boiler Room;
- Administration Building;
- Maintenance Building;
- Gatehouse;
- Concentrator (disposal line).

The ablutions are all combined to have one connection for disposal to the municipal sewage treatment system, from the concentrator and conversion sites.

14.5 PLANT LAYOUT

14.5.1 Overall Site Arrangement

The complete processing of spodumene ore to lithium hydroxide occurs at two separate processing facilities, located at two separate sites. These facilities are the Concentrator Site and the Conversion Plant Site. Both sites are within the overall site permit boundary, however the sites are not connected by private road, rather the



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passage between the sites is on public road, including the transport of spodumene concentrate and conversion plant tails between the two sites. The two sites are approximately 2.5 km apart.

The concentrator site contains the processing facilities for the beneficiation of spodumene ore to spodumene concentrate (SC6).

A bi-directional pocket-style overland conveyor connects the concentrator and chemical plant sites. The conveyor consists of pulley systems, at both sites, for belt raveling and unraveling as well as booster stations at locations of high conveyor tension. The routing of the pocket conveyor is shown in green on the overall site arrangement drawing in Figure 14-8. SC6 is transported from the concentrator site to the chemical plant facility via the overland conveyor. Meanwhile, the chemical plant tailings stream (~ 37 t/h) is backloaded onto the returning section and is conveyed to the concentrator. A dedicated conveyor system is installed at the concentrator site to collect all dry tailings streams and transport them for disposal to the waste rock and tailings storage facility (WRTSF).

The concentrator location has been selected based on its proximity to both the mining operations and the waste rock and tailings storage facility. Concentrator feed shall be by overland conveyor and dry tailings disposal shall be by belt conveyor to the WRTSF in the early years (estimated year 4) and by belt conveyor to exhausted mining pits once available for backfilling.

The conversion plant layout has been selected based on its proximity to the CSX Transportation rail line, which lies north of the site. A rail spur from that line shall be built to service the facility and will be used to import bulk consumables (reagents) and export LiOH product.

Both the concentrator site and the conversion plant site layouts have been developed with the flow of bulk materials as the primary consideration in the arrangement of facilities. The flow of bulk material has been considered both from a processing route and a road transportation of bulk materials perspective.

In addition, the following factors have been considered in developing the site layout:

- Site topography and geotechnical ground conditions;
- Minimize visual impact for surrounding residents;
- Avoidance of existing natural water courses (where possible);
- Site stormwater and run-off capture and management;
- A single site entry point and security gate to control access on and off the plant site;
- Traffic management associated with reagent deliveries and light vehicles;
- HV electrical feed location from utility provider;
- Administration and other facilities located with minimum intrusion into the processing area.

The overall site general arrangement, including the locations of processing plant and the conversion plant is presented in Figure 14-8.

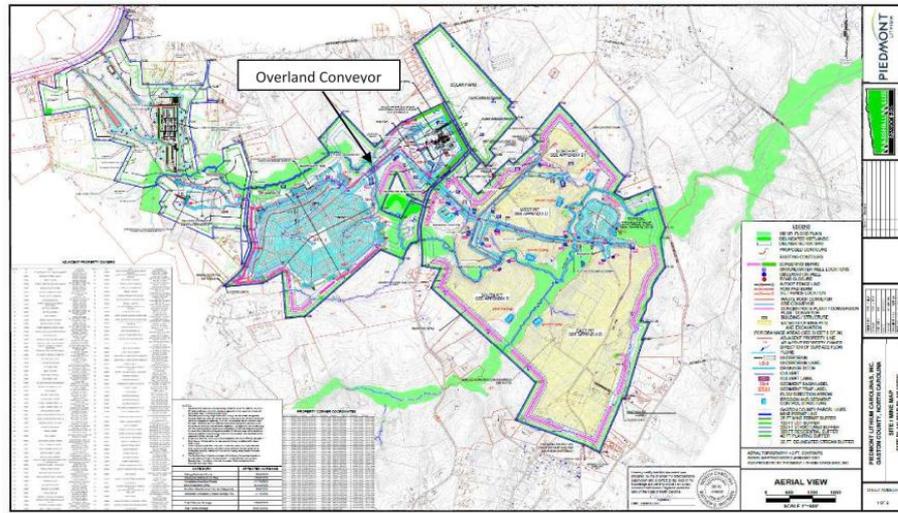
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Figure 14-8 – Integrated Manufacturing Campus Site Plan

14.5.2 Processing Plant Site

The concentrator site has been located immediately to the north-east of the mining operation.

Waste rock from the mining operation is crushed at the mine and transported by belt conveyor to the WRTSF at approximately 4,700 t/h. This conveyor route has been optimized to reduce conveying costs.

Ore from the mining operation is primary crushed at the mine and transported by belt conveyor to the concentrator site at approximately 300 t/h. This conveyor route has been aligned with much larger waste rock conveyor, and as such the ore storage and reclaim for process plant feed has been positioned along this alignment, at the southwest edge of the concentrator site.

Dry processing facilities (ore crushing circuit and by-products drying circuits) are located outside. Crushed ore is stored in a closed bin to minimize fugitive dust emissions. Wet processing facilities are located within processing buildings.

There are four main processing buildings on the site, these are:

- Spodumene and mica processing;
- Spodumene and mica product filtration, storage, and loadout;
-

The SC6 conveyor loadout is positioned west of the spodumene and mica concentrate shed for ease of materials handling.

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The concentrator site has been arranged such that there is a common loop road for the transport by truck of bulk materials. This loop road accommodates the following bulk material transfer requirements:

- Emergency SC6 loadout (to open truck by front end loader);

A weigh bridge has been positioned to weigh incoming and outgoing trucks.

The crushing plant, complete with fine ore storage, has been positioned to optimize belt conveyor transfer distances and to minimize its interaction with bulk transport vehicles.

The spodumene and mica processing building has been arranged such that all products streams can be readily conveyed to the loadout facility positioned on the loop road. Consideration has also been given to the various independent water circuits within the building, and equipment has been arranged to avoid cross contamination of water circuits and to minimize the need for separate bunds.

The by-products processing plant has located in an independent building due to the use of hydrofluoric acid in the circuit as a flotation reagent, which is toxic and therefore processing areas utilizing hydrogen fluoride are segregated from the remainder of the plant. The by-products processing plant has been positioned adjacent to the tailings conveyor such that the by-products plant feed can be redirected readily to the WRTSF if the by-products plant is offline.

Reagent storage, preparation and distribution facilities are located in close proximity to their consumption locations, and as such the reagent areas have been separated as follows:

- Spodumene and mica reagents;
-

A water treatment plant (WTP) is located in the southwest of the spodumene processing plant, below the main water services area, to minimize pipe runs to the raw water tank.

The electrical power factor correction and HV switchyard has been positioned on the south side of the process plant such that:

- It is in close proximity to the incoming power line, which is anticipated to approach the site from the south along Whitesides Road;
- It is central between the Concentrator site and the mining operations, as it provides an HV feed for both of these operations.

Electrical transformers and LV switch rooms have been located in various locations around the plant to minimize low voltage cable runs, with particular consideration to high power loads.

Other non-processing buildings on the site are:

- Administration facility;
- Processing laboratory;
- Workshop and warehouse;
- Plant access security gatehouse.

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These facilities have been located on the eastern side of the concentrator site, adjacent to the site entry point to minimize interaction between administrative personnel and processing operations. The workshop and laboratory have been positioned to allow ease of equipment and metallurgical samples between the process areas and these facilities.

The guard house will be located at the entrance of the property to monitor pedestrian and all vehicle traffic to the site.

Provision has been made in the site layout for an ore sorting circuit should it be deemed necessary in the future. The layout of the processing plant is presented in Figure 14-9.





Figure 14-9 - Process Plant Layout

14.5.3 Lithium Hydroxide Conversion Site

The conversion plant site has been located in the north-west area of the overall site permit boundary, just south of the CSX Transportation rail line. The layout of the processing plant is presented in Figure 14-10.



Figure 14-10 - Lithium Converter Plant Layout

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15 INFRASTRUCTURE**15.1 SPODUMENE CONCENTRATOR****15.1.1 Potable Water**

Potable water is provided to the plant by a connection to the municipal water supply. Potable water is distributed to following areas:

- Administration facility;
- Processing laboratory;
- Workshop and warehouse;
- Plant access security gatehouse;
- Spodumene and mica processing;

Where potable water is used for the supply of emergency shower and eyewash circuits, a dedicated pump and in-line heater is provided.

15.1.2 Sewage

Ablution facilities are located in following areas:

- Administration facility;
- Processing laboratory;
- Workshop and warehouse;
- Spodumene and mica processing;

Sewage from these facilities report by gravity to sewage pump stations and is pumped to the chemical plant site for discharge into the municipal sewer system.

15.1.3 Fire Services

The concentrator site is protected by a fire water system in accordance with NFPA standards. This system comprises of a dedicated fire water storage stank, electrical and diesel fire water pumps, fire water hose reels, standpipes, and sprinkler systems as required.

Automated fire detection and suppression systems are included in high-risk areas such as electrical switch rooms and hydraulic rooms.

15.1.4 Natural Gas

Natural gas shall be used as the fuel source for various heating duties associated with the HVAC systems around the site.

Natural gas is supplied from the service provider network (Dominion).

15.1.5 Roads

Site roads shall be provided for all operations and maintenance activities. Roads shall be asphalt in high traffic areas only.

15.1.6 Diesel

A diesel storage and distribution facility shall be provided at the concentrator site to supply mobile equipment at the site.

Diesel shall be supplied by road tanker.

The facility shall provide sufficient diesel storage, provision for tanker unloading and for refueling of mobile equipment.

All other fuel and lubricants on site will be stored and dispensed from a dedicated storage area.

15.1.7 Compressed Air

Compressed air is provided by rotary screw compressors. The following compressed air circuits are included:

- Crushing circuit plant air;
- Spodumene and mica processing plant air;
- Spodumene and mica processing instrument air (from plant air circuit);
- Spodumene concentrate filter air;
- Process tailings filter air.

Each compressed air circuit is complete with air dryers and filters to provide the required air quality, and with air receivers sized to accommodate the maximum instantaneous flow rate required.

Duty/standby compressors are provided for plant air services. Plant air circuits shall be used to feed instrument air circuits with additional filtration, drying and storage as required.

Flotation cell low pressure air is provided by centrifugal blowers. The following low pressure flotation air circuits are included:

- Spodumene flotation blowers;

Duty/standby blowers are provided for each circuit.

15.1.8 Electrical Power Supply and Distribution

The Concentrator and pit crusher will be supplied by one main electrical entrance of 3 phases 13.8 KV line from local utility provider. The size of this line is around 33 MVA including

- 24 MVA for Concentrator and by-product Plant;
- 9 MVA for mining pit-crushing.

The main low voltage power distribution throughout the plant will be 277/480V, 60 Hz, 3 phases. Medium voltage will be 4,160V, 60Hz, 3 phases.

In the concentrator, a 13.8 KV substation including switchboard and 12 feeders will supply 8 E-Rooms located in different areas near to motors to reduce cable cost and drop voltage. To optimize maintenance cost and spare parts, the electrical distribution will be based on 8 standard 2.5 MVA transformers 13.8KV/480V with MCCs sized at 1600A and 1 standard 2.5MVA transformers 13.8KV/4.16KV for ball mill.

In the concentrator, the largest motors will be:

- Ball mill with 2,000 HP (1,500KW). It will be started with 4.16 KV VFD;
- Secondary and tertiary crushers 400 HP (300KW). It will be started by 480V VFD;
- Water pumps 350 HP (260KW). It will be started by 480V VFD.

For pit-crushing, we will install a main 13.8 KV substation with switchboard including 2 feeders supplying :

- 7.5 MVA mobile 13.8 KV substation and pit crushing equipment;
- 3 conveyors in pit crusher with 500KVA each.

15.1.9 Control and Communication

PLC to Remote Input/Output (RIO) communications will be Ethernet over multimode fiber, copper and / or wireless. Communications within the plant area will be hardwired.

The operator control stations (OCS) located in the control rooms allow processes to be started, controlled, monitored, and shut down through the PCS (Plant Control System).

The concentrator PLC processor racks will be in switch rooms except for vendor package PLCs that may be in field control panels. The PLC hardware and associated code will be divided according to the process areas in a logical manner.

Ethernet communications within the plant to locations outside of the Switchrooms / control room building/s shall be interconnected with a multimode fiber optic self-healing ring/mesh. Communications within buildings and panels shall be radial (star) copper CAT5E communications with RJ45 connections. Connections to distant equipment will be by single mode fiber optic cable.

Communications to EOLs and VFDs will generally be Ethernet communications dependent on the hardware, where communications are Ethernet, they may be combined with RIO networks. EOL and VFD communications networks may be a combination of self-healing ring, star, or daisy chain configurations.

15.1.10 Administration Facilities

Administration offices and facilities will be provided for all operations and maintenance personnel. Buildings shall be of prefabricated modular construction.

All buildings will be plumbed, powered and contain HVAC as required. The following buildings shall be included:

- Plant offices including toilets, training room and first aid facilities;
- Change-house complete with locker rooms, showers and toilet facilities;
- Security gate house.

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15.1.11 Control Room

The control rooms will be modular, air-conditioned and designed to be quiet and with less vibration from around equipment. It will be located inside the process near to equipment. It will include:

- 2 OWS: Operation Workstation;
- 1 EWS: Engineering Workstation;
- 2 Mains redundant PLCs;
- Servers;
- UPS;
- Ergonomic furniture.

15.1.12 Laboratory

A site laboratory facility will be provided. The laboratory will be of a prefabricated modular construction and connected to all services.

15.1.13 Workshop/Warehouse

A combined maintenance workshop/warehousing facility shall be provided. This building will be of steel frame construction on a concrete slab and include racking, lighting, power, ventilation and plumbing as required. It shall be fitted with an overhead crane for maintenance activities.

An exterior lay-down area with area lighting shall be provided for the storage of larger parts, equipment and materials.

15.2 LITHIUM HYDROXYDE CONVERSION PLANT

15.2.1 Non-Process Facilities

The facility includes the non-process buildings listed in Table 15-1. All buildings (with the exception of the maintenance shop/warehouse) are insulated and equipped with heating and air conditioning systems.

Table 15-1 - Non-Process Buildings

Building Name	Size & Description
Administration	<ul style="list-style-type: none">• 50 ft x 50 ft• Men's & women's locker and showers
Lunchroom	<ul style="list-style-type: none">• 45 ft x 50 ft• 25-person capacity

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Building Name	Size & Description
Entrance Guard House	<ul style="list-style-type: none"> • 15 ft x 20 ft • 25-person capacity
Laboratory	<ul style="list-style-type: none"> • 50 ft x 50 ft • Parking lot
Maintenance shop/warehouse	<ul style="list-style-type: none"> • 65 ft x 100 ft • 5 t overhead crane

The Entrance Guard House, Administration Building and the Lunchroom are located at the north end of the facility, adjacent to Hephzibah Church Road. The laboratory is located between the Lithium Product Storage building and the reagents area. The maintenance shop/warehouse is located north of the reagents area.

15.2.2 External Pipe/Cable Racks

Pipe/cable racks will be used for the distribution of utilities (such as electricity, compressed air, water, etc.) as well as for the transfer of process fluids and slurries.

The locations and sizes of major pipe/cable racks, located outside of process areas/buildings, are shown in the site plan and isometric drawings. Two types of pipe/cable tray are included:

- A heavy pipe/cable rack;
- A light pipe/cable rack.

The site plan includes a total of 3011 feet of pipe/cable rack. 1535 feet of heavy rack and 1476 feet of light rack.

15.2.3 Electric Power distribution

The power distribution for conversion plant is based on 13.8 KV in main entrance delivered by local utility power provider. At the upstream we have a main substation sized at 2000A/13.8KV with 12 feeders that supply 6 Switchrooms. The plant will include 12 transformers of 2.5 MVA each located in different areas. All MCCs will be standardized to 480V/1600A. To optimize cable length and reducing voltage drop, Switchrooms will be located near to major equipment when it's possible.

Major equipment will be:

- Falling Film Evaporator (FFE) with Mechanical vapor recompression (MVR) 700 HP (520KW);
- Crude LiOH MVR 500HP (370KW);
- Drying air compressor 450 HP (335KW).

15.2.4 Process Control and Site Communications Systems

A budget allowance has been included for a distributed process control system (DCS) hardware and associated programming, site communications and for CCTV for process areas.

The control system of Lithium Conversion plant will be based on Metso's PROSCON process control system. It will supervise and control the following areas:

- Calcining;
- Grinding;
- Leaching;
- Filtration;
- Polishing and conversion.

PROSCON will take care of critical control tasks and will offer 5 control levels:

- Field level: it concerns all the field devices such as control valves, transducers, transmitters etc., are at this level. Input (transmitters, transducers...) /output as units. Input devices (transmitters etc.) and output devices (control valves, etc.) are connected to input/output units (I/O units) that convert the 4-20mA or digital signals to specially coded signals for the Fieldbus. And also converts the coded signal to 4-20mA.
- Local Plc controller: It takes data from the Fieldbus to control individual control loops. At a time more than one can be controlled. The data on the Fieldbus contains all the information for each loop input and output. The local process controller, using only milliseconds of time, controls each in turn. The PID of each is separately programmed. To the operator, it looks as if all the loops are controlled at the same time.
- Overview and supervision: This is the plant supervisory unit. All the information about the control loop is displayed in this unit using Video display unit (VDU). It will have 5 workstations which display the distributed control units around the plant. From this unit, an operator can adjust the setpoint or he can change from manual to automatic etc.
- Production Control: At this level, advanced control functions will allow various crucial management systems in the plant like inventory control, billing and quality control, historian.
- Production scheduling: report and data will be generated at this level and sent to upper management to schedule production and to define strategic enterprise decisions.

16 MARKET STUDIES

16.1 MARKETING

16.1.1 Lithium Demand and Supply Outlook

Benchmark Mineral Intelligence ("Benchmark") reports that total battery demand will grow to 312 GWh in 2021 translating to 297 kt of LCE demand in 2021, a growth of 41% over 2020 demand. Benchmark forecasts total demand in 2021 to be 430 kt on an LCE basis.

Benchmark further expects the market to remain in a structural deficit for the foreseeable future as demand gets a head-start on supply. In the near impossible scenario that all projects come online on time as planned and without any issues, the first surplus will not occur until 2025. Benchmark believes that in this extreme case, a surplus could only be expected to last a few years before demand forces the market into a large deficit without further new projects yet undiscovered or developed (see Figure 16-1).



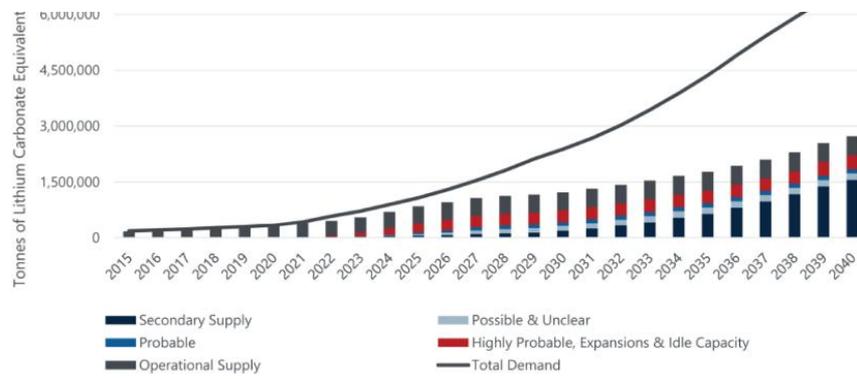


Figure 16-1 - Lithium hydroxide supply demand forecast

16.2 MARKETING STRATEGY

Piedmont is focused on establishing strategic partnerships with customers for battery grade lithium hydroxide with an emphasis on a customer base which is focused on EV demand growth in North America and Europe. Piedmont will concentrate this effort on these growing EV supply chains, particularly in light of the growing commitments of battery manufacturing by groups such as Ford, General Motors, LGES, Northvolt, SK Innovation, Volkswagen and others. Advanced discussions with prospective customers are ongoing.

16.3 PRODUCT PRICING

This Study assumes long-term pricing of \$18,000/t for battery quality lithium hydroxide from 2025 onwards (see Figure 16-2).



Figure 16-2 - Battery Grade ("BG") lithium hydroxide pricing

As shown in Figure 16-3 below North America is seeing considerable growth in battery plant capacity. Figure 16-4 below shows the corresponding lithium hydroxide demand for the announced U.S. battery plant capacity at full production.

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Figure 16-3 - Current Battery Plants Operating, Under Construction or Announced in the USA

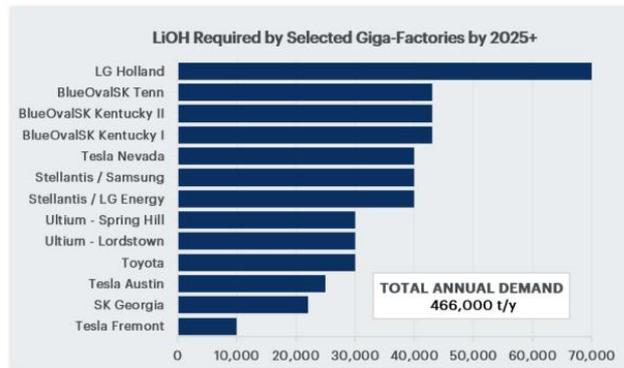


Figure 16-4 - LiOH Demand for Select USA Giga-Factories

16.4 MATERIAL CONTRACTS

Material contracts have not been negotiated for the PLL project. Contracts will be necessary for successful marketing of the spodumene concentrate and/or lithium hydroxide. Material contracts required will likely include:

- Transportation – The business will contract with requisite railroad and truck transportation companies to transport the spodumene concentrate or lithium hydroxide to market. In some instances, consumers may separately negotiate transportation logistics and purchase material directly from the mining or chemical facilities.
- Sales – Sales contracts are a mix of spot and pre-negotiated long-term purchase arrangements.
- Mining – As expressed in this TRS, contractual mining arrangements may be utilized as opposed to an owner-operated mining venture.
- Utilities – Contractual agreements pertaining to utilities, including electricity, water, sewer, and fuel will material to the operation.
- Construction/Development – Prior to mine development, material contracts related to the construction of infrastructure and earthwork will be required.

17 ENVIRONMENTAL STUDIES AND PERMITTING

17.1 SUSTAINABILITY

In view of the planned manufacturing of lithium hydroxide monohydrate, Piedmont commissioned Minviro, an industry-leading practitioner of LCA (Life Cycle Assessment) impacts of manufacturing battery materials to perform a prospective LCS of the site. As a result, Piedmont decided to enhance the sustainability footprint by implementing the following aspects in the current project study:

- Include a solar farm on the property with the objective of producing and supplying the Piedmont industrial complex electricity needs;
- Replacing the conventional fossil-energy fuel used by haulers with electric equipment for ore transportation between pits, disposal areas and concentrator;
- Co-locating operations on the same Gaston County site to minimize transit and allowing unused by-products streams to be repurposed for site redevelopment;
- Expanding the by-products operations to serve valuable markets for quartz, feldspar and mica.

17.2 ENVIRONMENTAL STUDIES

The following environmental studies have been completed in connection with the Project (Table 17-1).

Table 17-1 – List of Completed Environmental Background Studies for the Project

Study Description	Author	Date of completion
Jurisdictional Delineation	HDR Engineering	June 2018, December 2018, and April 2019;
Jurisdictional Delineation	HDR Engineering	Expanded area report complete November 2021
Threatened and Endangered Species Survey	HDR Engineering	December 2018; expanded area field work report completed November 2021
Cultural Resources Survey for the Piedmont Lithium Mine Project, Gaston County, North Carolina	HDR Engineering	April 2019
Summary of Waste Rock and Process Tailings Geochemical Assessment, Piedmont Lithium Project	Marshall Miller & Associates	August 2019
Addendum Report: Results of Humidity Cell Leaching Tests, Piedmont Lithium Project	Marshall Miller & Associates	December 2019
Roadway Abandonment Technical Memo	HDR Engineering	March 2019
Technical Memorandum: Groundwater Model Piedmont Lithium, Gaston County, NC	HDR Engineering	June 2019
Technical Memorandum: Groundwater Model Piedmont Lithium, Gaston County, NC	HDR Engineering	August 2021
Technical Memorandum: Toxicity Testing of the Lithium Hydroxide Conversion Plant Tailings, Piedmont Lithium Carolinas, Inc., Gaston County, NC	HDR Engineering	August 2021



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Study Description	Author	Date of completion
Acid Base Account and Toxicity Characteristics Leaching Procedure Test Results Summary, and Proposed Mitigation Plan Associated with Potentially Acid Producing Waste Rock in the Southern East Pit	Marshall Miller & Associates	August 2021
Technical Memo: Water Quality Testing, Piedmont Lithium, Gaston County, NC	HDR Engineering	March 2020

17.3 PERMITTING

HDR Engineering has been retained by Piedmont to support permitting activities on the proposed Project.

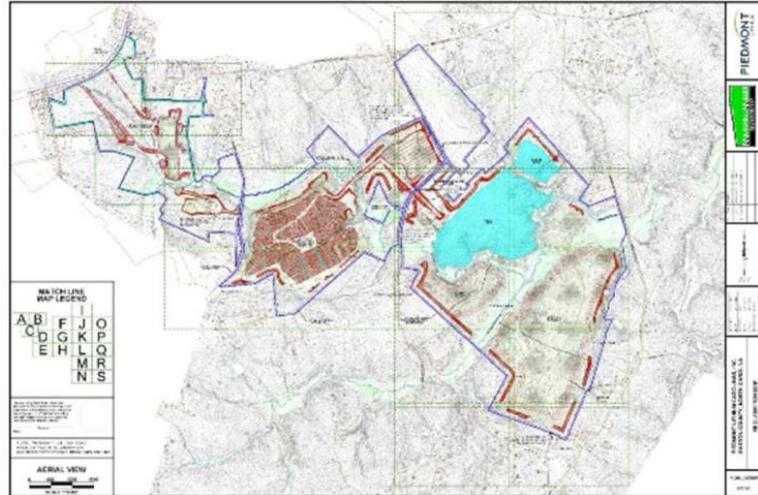
17.3.1 Army Corps of Engineers Section 404 Permit

In November 2019, the Company received a Clean Water Act Section 404 Standard Individual Permit from the US Army Corps of Engineers for the concentrate operations. The Company has also received a Section 401 Individual Water Quality Certification from the North Carolina Division of Water Resources. In connection with the 404 Permit an Environmental Assessment was completed for the Project which resulted in a Finding of No Significant Impact ("FONSI").

17.3.2 State Mining Permit

The integrated Carolina Lithium project requires a North Carolina State Mining Permit from the North Carolina Department of Environmental Quality ("NCDEQ") Division of Energy, Mineral and Land Resources ("DEMLR"). The Company submitted a mine permit application to DEMLR on August 31, 2021. A public hearing in relation to the mine permit application was held on November 15, 2021. The Company has received additional information request ("ADI") in connection with our mine permit application. We provided a response to the ADI on December 17, 2021.

Mine closure is regulated by the state of North Carolina as a condition of the mining permit. Costs associated with reclamation are included in yearly operating costs and the total for life of the mine is over 5.2 million dollars. Reclamation plans are included in the mine permit application and shown below:

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17.3.3 Bonding

As part of the application for a mining permit Piedmont Lithium Carolinas, Inc has calculated the cost of a blanket bond. The blanket bond will be required to be filed with the state of North Carolina for reclamation costs if not completed by Piedmont Lithium Carolinas, Inc. before the permit can be issued.

17.3.4 Air Permit

Piedmont will submit a determination letter to NCDEQ Division of Air Quality (“DAQ”) in January, 2022 requesting concurrence with respect to the primary activity of the Carolina Lithium Project.

17.3.5 Stormwater Permit

The Carolina Lithium Project requires a NCG02 Stormwater permit from the Division of Water Resources (“DWR”) for the project. The application was submitted on November 22, 2021. This NCG02 permit will detail all monitoring and testing requirements as well as the prescribed schedule for monitoring.

17.3.6 Rezoning

The Carolina Lithium Project remains subject to local rezoning and permit requirements. Piedmont remains in pre-application consultation with Gaston County at this time. A rezoning application will follow receipt of a state mining permit. The Company will apply for a special use permit required under the Gaston County UDO upon completion of the rezoning process.

17.3.7 Summary of Permits

The table below summarizes the status of the material permits required for startup of the Carolina Lithium Project.

Table 17-2 – List of Permits Required for the Startup of the Project

Permit Type	Permit Submittal	Current Status
Carolina Lithium		
Clean Water Act Section 404	December 2018	Received – November 25, 2019
Individual 401 Water Quality Certification	2019	Awaiting certification for updated acreage of integrated site
Mine Permit	August 31, 2021	Awaiting response from DEMLR based on additional information request response provided December 17, 2021
I-3 Zoning	TBD	Awaiting receipt of mine permit
Special Use Permit	TBD	Awaiting receipt of I-3 Zoning
Air Permit – PSD Title V	TBD	Preparing determination applicability letter to determine type of air permit required for the integrated site
NGO2 Stormwater Permit	November 22, 2021	Awaiting response from DEMLR
Municipal Wastewater	TBD	

The table below summarizes the status of the material permit revisions and modifications required for sustained production at the Carolina Lithium Project following the approval of initial permit(s).

Table 17-3 – List of Permit Modifications After Approval Required for Ongoing Project

Permit Type	Permit Submittal	Description
Carolina Lithium		
Clean Water Act Section 404 Addendum	TBD	Amendment to approved Section 404 permit to include jurisdictional waters impacted by: completion of current waste pile design; waste pile expansion to the south of designed waste pile; expansion of West Pit to North Pit.
Individual 401 Water Quality Certification Addendum	TBD	Amendment to include jurisdictional waters impacted by: completion of current waste pile design; waste pile expansion to the south of designed waste pile; expansion of West Pit to North Pit.
Mine Permit Modification	TBD	Amendment to permit boundary to include: waste pile expansion to the south of designed waste pile; access from Whitesides Road to South Pit; expansion of West Pit to North Pit.

17.4 WASTE DISPOSAL AREA

17.4.1 Disposal Area Design

MM&A designed a waste rock disposal area for the Project. MM&A prepared construction drawings and design assumptions for the disposal area, as well as Guideline Technical Specifications providing sufficient detail and technical guidance for construction. The waste rock disposal site will consist of waste rock generated from pit excavation operations, overburden stripping soil, and tailings (i.e., fine waste rock). In general, the waste rock disposal area is designed with 2 (horizontal) to 1 vertical slopes (2H:1V). Design drawings and specifications are included in the mine permit package prepared for PLI.

Mine planning indicated the waste rock disposal area would contain 22.5 Mt of waste, south pit backfill would contain 14.8 Mt of waste, and east pit backfill would contain 132.5 Mt of waste. Additional 79.4 Mt of waste storage would be stored in the future waste storage area which will require a mine permit modification for use.

17.4.2 Waste Disposal Preliminary Stability Assessment

MM&A completed a preliminary stability assessment to aid the design of the waste disposal areas. The stability analyses for the disposal areas were performed using the computer program REAME (Rotational Equilibrium Analysis of Multilayered Earthworks). The required minimum factor of safety against slope failure is 1.5 for static loading. The stability assessment meets or exceeds the required minimum factor of safety requirements. Strength parameters used for the assessment are summarized in the Table 17-.

Table 17-3: Parameters Utilized for Waste Disposal Stability Analysis

Material	Cohesion (psf)	Angle of Internal Friction (Degrees)	Unit Weight (pcf)
Waste Rock	0	40°	130

17.4.3 Waste Rock and Tailings Geochemical Assessment

MM&A designed and implemented geochemical sampling and analysis programs to include both waste rock (overburden) and process tailings. The assessments examined the potential for the waste rock and tailings generated from the proposed Piedmont Lithium Project (*the Project*) to have adverse effects on the environment. With regard to the waste rock, the work included sampling and testing of over 100 composited rock core samples from 16 different core holes distributed throughout the four main pit areas. Sampled hole locations and depth intervals in the holes were designed to provide an evenly distributed assessment of the proposed mine area. The core samples were collected by both MM&A and PLI geologists. The program also included 10 process tailings samples collected from pilot testing activities, as well as tailings from pilot testing of chemical plant activities.

Analyses conducted on the waste rock and tailings samples included Acid Base Accounting (ABA), “whole rock” elemental determination, and Toxicity Characteristic Leaching Procedure (TCLP). Where applicable, the ABA analyses results were supplemented with sulfur fractionation (sulfur forms) analyses to better determine the distribution of sulfidic (pyritic) sulfur in selected samples. In addition, selected waste rock and tailings samples are currently being analyzed for leachability via humidity cell testing.

The results of the waste rock analyses indicate no significant potential for the material to produce acidic conditions in approximately 90% of the waste rock, the possible exception being a portion of the southeastern side of the East Pit where the host rock changes from amphibolite to metasediment. Details of the waste rock and tailings analyses are included in the reports titled “Summary of Waste Rock and Process Tailings Geochemical Assessment Piedmont Lithium Project – August 2019” and “Addendum Report: Results of Humidity Cell Leaching Tests, Piedmont Lithium Project – December 2019” completed by MM&A.

For the majority of the Project area, the amphibolite waste rock paste pH values for the samples are typically between 9 and 10, with only shallower samples of saprolitic rock exhibiting lower paste pH values in the 5 to 6 range. Total Sulfur for the amphibolite waste rock samples is generally in the range of 0.01 to 0.3 percent, with only three of the 101 samples having a total sulfur content greater than 0.5 percent. Amphibolite samples exhibiting a sulfur content greater than 0.2 percent were further analyzed using a sulfur fractionation procedure. Results of the sulfur fractionation analyses indicate that the total pyritic sulfur (acid-producing) present in the amphibolite samples is very low. With consideration of the sulfur forms, results show that amphibolite waste rock samples exhibit an excess alkalinity condition.

In the southeastern area of the East Pit, ABA testing of the metasediment host rock indicates that some of the samples contain sulfide concentrations high enough to potentially produce acid. The affected area is estimated to include approximately 34 million tonnes of waste rock, including ~25% overburden and saprolite, ~19% mudstone, ~13% amphibolite, and ~43% schist. The schist, and to a lesser degree the mudstone, display the greatest potential to generate ARD if not properly managed. In particular, most of the schist samples exhibit significant sulfidic sulfur and very little neutralization potential (NP). The overburden and saprolite samples appear to be thoroughly

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leached and are expected to be essentially inert. A mitigation plan for the potentially acid producing material has been created. The proposed mitigation plan, which includes selective handling, alkaline amendment addition, at least partial encapsulation, and final burial in a sub-aqueous environment will greatly reduce any risk associated with excavation of the potentially acidic waste material. The final amount of material which will be subject to such practices is unknown. Additional testing is ongoing to better estimate volumes of such material for mine planning purposes. The results of testing specific to the waste rock in the southern-most portion of the East Pit are presented and further discussed in an August 27, 2021 memorandum titled "Acid Base Account (ABA) and Toxicity Characteristic Leaching Procedure (TCLP) Test Results Summary and Proposed Mitigation Plan Associated with Potentially Acid Producing Waste Rock in the Southern Portion of East Pit". Mine planning as part of the feasibility study assumes that potentially 16.8 million tonnes of material would need to be treated and encapsulated. Costs of \$16.6 million were included in the financial model for alkaline amendments at a rate of 2%.

ABA analyses for both the concentrator and the chemical plant tailings samples indicate very low Total Sulfur content, high paste pH values, and excess neutralization potential for all tailings samples. In particular, the chemical plant tailings have significant excess neutralization potential and may be utilized as a key component of the mitigation plan.

Waste rock and tailings samples were also analyzed to determine their overall elemental constituents, as a means for better understanding the "whole rock" components of the materials. The elemental analyses results were compared against relevant regulatory guidelines to screen for potentially problematic components.

The ABA and elemental analyses results were used as a guide for selection of a representative set of waste rock and tailings samples for further testing via TCLP analysis. The TCLP procedure is a short-term but aggressive test for detecting contaminants that may leach from the samples. Results of the TCLP testing were compared against the Environmental Protection Agency's (EPA) "D" list, a list of regulatory levels for the "toxicity" characteristic as determined specifically from the TCLP test. The TCLP results indicate that all of the samples, including the metasediment from the East Pit, yielded results well below "D" list toxicity threshold levels.

Overall, results of this assessment indicate that acidic drainage is not expected to be released from either the waste rock (overburden) or the process tailings, with the possible exception of the southeastern portion of the East Pit (for which a mitigation plan has been established). In addition, consideration of whole rock elemental and TCLP test results does not indicate the potential for leaching hazardous levels of contaminants, as defined by EPA's "D" list.

18 CAPITAL AND OPERATING COSTS

The objective of developing the capital and operating cost estimates is to provide substantiated costs feeding into the definitive feasibility study (DFS) pertaining to the Carolina Lithium Project – DFS (Project).

The parameters for the estimate used are as follows:

- Estimate Target Accuracy Initial Capital Costs +15% / -15%;
- Estimate Target Accuracy Sustaining Capital Costs +15% / -15%;
- Estimate Target Accuracy Operating Costs +15% / -15%;
- Estimate Base Date Q4 2021;
- Estimate Base Currency United States Dollars.

The target estimate accuracy is in accordance with AACE Class 3 estimate as per AACE standard 18R-87.

18.1 CAPEX BASIS OF ESTIMATES

The initial CAPEX estimate includes all Projects' direct and indirect costs to be expended during the implementation phase of the Project. It is deemed to cover the period starting from the approval date by PLL of this DFS report and finishing at the successful completion of the commissioning phase. Any cost to be expended beyond the commissioning phase, i.e., transfer to operations, performance tests, start-up/ramp-up and operations of the PLL facilities will be included with sustaining CAPEX or OPEX.

Table 18-1 is providing the definitions of terms used in the capex estimation.

Table 18-1 - Capex Estimate Definition of Terms

Term	Definition
Initial CAPEX	Refers to capital expenditures incurred prior to the start-up of operations of a mineral plant
Sustaining Capital	Refers to capital expenditures incurred during the LOM, beginning at the start-up of operations of a mineral plant, necessary to maintain the plant's throughput capacity
Working Capital	Working capital is the cost associated with the operation of the plant prior to the first shipment or sale taking place.
Deferred Capital	Deferred Capital are capital expenditures deferred from the initial start-up of the Project.
Material Take Offs (MTO's)	These are theoretical quantities directly taken off 3D models or 2D drawings; theoretical quantities don't account for construction growth. It should be noted that no growth is applied against quantities generated through factors, estimates, allowances or conceptual design.
Construction growth	Construction growth, as identified by the estimating group, consist of additional quantities necessary to compensate for swelling, losses, theft, wastage, overlap, compaction factor, cut factors, etc.
Allowances	Allowances are necessary to ensure that the scope of work is covered in its entirety; it is the estimator's responsibility to validate quantities obtained by Engineering and allow for quantities that cannot be expressly defined, that are missing or, ultimately, when it is not economically viable to perform detailed take-offs.

Term	Definition
Level of confidence	For the purpose of evaluating the accuracy and, ultimately, the contingency (as defined below), an objective assessment of the level of confidence will be made. Typically, this assessment is made on a per package basis. The intent is to identify the level of definition and make an assessment of the possible variations from the estimated costs during the implementation phase.
Accuracy	Per AACE, estimate accuracy is an indication of the degree to which the final cost outcome of a project may vary from the estimated cost. It is traditionally represented as a +/- percentage range around the estimated cost.
Contingency	Contingency is a provision added to an estimate to cover uncertainties inherent to project execution. Estimating is an inexact science and recognizes that unknown uncertainties should be considered in a project estimate. A contingency is added to reduce the probability of overrunning the estimated budget. Contingency does not account for any change to the baseline scope of work, work stoppages (strikes or lock-out), natural disasters, excessive/unexpected inflation (i.e. beyond that estimated), excessive/unexpected currency fluctuation or any other unpredictable event that may occur. By its nature, the contingency fund is expected to be expended during the Project and should be considered an integral part of the project CAPEX.
Escalation	Escalation is an amount added to an estimate to cover for the future value of an element of

	cost due to inflation.
Risk	Risk is an amount resulting from a Risk assessment session carried out to identify, in the planning stage of a project, potential threats or cost opportunities that could adversely or positively affect the estimated cost. Since the risk (threat or opportunity) may in fact never materialize, the risk monies are typically shown as a reserve, below the total installed cost; unlike the contingency, the risk monies may never be expended.

18.1.1 Direct Estimate Preparation

The following approach will be used to estimate the direct costs for the Project.

Mine and Concentrator

Mining

The mine plan served as the basis for the MTO preparation pertaining to the following:

- Mine fleet, complete with major and support mining equipment as well as services equipment;
- In pit crushing and conveyors;
- Costs for freight, assembly, training, spare parts and consumables will be identified separately;
- Site preparation for Waste Storage Disposal Area.
- Operations and maintenance costs for pre-production operations (i.e. up to year 0)
- All above will also apply to sustaining capital covering, namely, additions and replacements, to be presented per year.



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Bulk Earthworks

A detailed design and MTO's were used to estimate the following:

- Bulk Earthworks;
- Site Roads;
- Site Drainage and water catchment.

Concrete / Structural / Platework

Design was done and used to estimate the quantities for concrete, structural steel and platework. The MTO list was sent to local contractors for prices. The received information of the unit rates for the commodities was used in the project Capex estimates.

Mechanical Equipment (Primero)

A mechanical equipment list has been developed together with equipment datasheets for major equipment. The datasheets were sent for budget quotation to a list of recommended vendors. Proposals obtained were technically and commercially evaluated before a recommended vendor and price was selected.

The installation hours for mechanical equipment were obtained from local contractors and compared against Primero's internal database.

Piping

Piping procurement and installation pricing has been factored based on the installed mechanical equipment list and price. The factor has been broken down by WBS line and has been based on Primero's internal database of similar projects.

Electrical

Electrical design has been completed to produce major equipment datasheets, cable schedule and bulk material take-offs. The list has been sent to local suppliers to obtain budget quotations which will be evaluated and normalized.

Installation hours has been developed in conjunction with Primero's local sub-consultant Raw Electric.

Architectural Buildings

Sketches and a design criteria of the proposed plant buildings have been developed and sent to local suppliers for budget quotations.

Conversion Facility

Bulk Earthworks

HDR has completed a design and MTO list to estimate the following:

- Bulk Earthworks;
- Site Roads;
- Site Drainage and water catchment.

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Rail

HDR has completed a design for the rail spur and provide pricing for the spur and tie into existing rail line.

Concrete

Primero completed a design to estimate the quantities for all concrete and detailed civil works. Primero used the unit rates obtained from local contractors for the concentrator to estimate the conversion plant price.

Structural and Platework

Primero completed a design to estimate the quantities for all balance of plant structural fabrication works. Primero used the unit rates obtained from local contractors for the concentrator to estimate the conversion plant price.

MO completed a design and provided the supply price for in battery limit works. Primero has estimated MO in battery limit price for installation based on internal databases.

Mechanical Equipment

A mechanical equipment list for the balance of plant has been developed by Primero together with equipment datasheets for major equipment. The datasheets have been sent for budget quotation to a list of recommended vendors. Proposals obtained have been technically and commercially evaluated before a recommended vendor and price was selected.

Mechanical equipment within MO battery limits will be provided as a supply price by MO.

The installation hours for all mechanical equipment will be obtained estimated from Primero's internal database.

Piping

Piping within the MO battery limits has be priced as supply only by MO. Piping cost for balance of plant have been estimated based on a line and valve list produced by Primero. Small bore piping outside of MO battery limits has been factored as a percentage of mechanical equipment.

Installation of piping has been priced based on Primero's internal database.

Electrical

An electrical design has been completed to produce the major equipment datasheets, cable schedule and bulk materials take-offs. This design has been sent to local suppliers to obtain budget quotations which have been evaluated and normalized.

Installation hours have been developed in conjunction with Primero's local sub-consultant Raw Electric.

Architectural Buildings

Sketches and design criteria of the proposed plant buildings have been produced and sent to local suppliers for budget quotations.

18.1.2 In-Direct Estimate Preparation

Contractors' Temporary Facilities

It was assumed that the contractors will be responsible for their own construction trailers, tool crib, kitchen, storage, workshops, maintenance shop.

Contractors' Temporary Utilities

It was assumed that the contractors will be responsible for their own supply, delivery, storage, distribution and dispensing for:

- Water (domestic, potable and construction);
- Telecommunications;
- Fuel and gasoline.

For the execution phase, Piedmont Lithium may elect to be responsible for all utilities to avoid unnecessary storage and handling.

It should be noted that for Contractors' temporary facilities and utilities, the following will be included:

- Mobilization and transport to site;
- Rental charges;
- Insurance;
- Field assembly and erection;
- Set-up / hook-up;
- Maintenance and operations, including preservation;
- Dismantling, disassembly;
- Demobilization and transport from site;
- Restoration to original site condition.

Construction Equipment, including heavy lifts

Equipment to be supplied by the discipline contractor has been included in the unit rates solicited for the estimate.

Temporary Power

Temporary power will be under Contractors' responsibility; hence, the fuel powered generators will be used.

Scaffolding

As it is anticipated that a vertical contracting approach will prevail, scaffolding will be under contractors' responsibility.

Temporary Heating and Sheltering

Temporary heating and sheltering is falling under contractors' responsibility.

Labor Costs

Labor costs are a direct function of base unit man-hours, productivity factor for specific site conditions as well as of the all-inclusive labor crew mix wage rates; as such, the accuracy of labor costs can exponentially be affected by errors made to any one of these three (3) elements.



In order to ascertain the accuracy of the labor costs, base unit man-hours and productivity factors have been developed internally and then benchmarked against man-hours obtained through historical projects and contractor quotes.

Productivity factors have been estimated based on known local historical data, such as climate, as well as on established industry norms, such as time loss due to safety, in-plant movement, workweek, rotations schedule, height, confined space, repetitiveness, access restriction, congestion, etc. The resulting productivity factors have then been applied against base unit man-hours, which are assessed as having a PF of 1.0.

A Productivity Factor (PF) of 1.0 can be best described as favorable working conditions, i.e.:

- 40-hour workweek;
- No rotation schedule;
- Typical traveling distance for workers;
- Regular sized plant, limiting in-plant movement;
- Repeat technology, no complexity;
- Ambient weather of approximately +20° C, with little to no wind.

18.1.3 Engineering and Management

The engineering, project management and site management costs associated with the EPC packages have been estimated based on previous norms and projects. An organization chart will be developed to show the key positions required for the project. The costs have been reviewed as a percentage of direct and total project costs.

18.1.4 Owners Costs

All owners cost has been provided by PLL and integrated into the estimate by Primero.

18.1.5 Contingency

The purpose of contingency is to make specific provision for uncertain elements of cost within the Project scope and thereby reduce the risk of cost over-run to a predetermined acceptable level. Contingencies do not include allowances for scope changes, escalation, or exchange rate fluctuations.

Contingency reflects the measure of the level of uncertainties related to the scope of work. It is an integral part of an estimate and will be applied following a thorough analysis to all parts of the estimate, i.e. direct costs, indirect costs, services costs, etc.

Any defined item, no matter how preliminary the information, data or design, has been covered by specific allowances to complete the scope and not by contingency.

In addition to the calculated amounts for direct and indirect costs, allowances are incorporated for contingencies based on an assessment of the degree of definition available for each main cost center.

The analysis is made by assessing the level of confidence in each of the defining inputs to the item cost basis, be it engineering, estimate basis and vendor or contractor information. The weighted average of these inputs is used to define the contingency for that item. The analysis is undertaken for each discipline within each area.

Contingency is assigned to each estimate line item and is based on Table 18-2.

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Table 18-2 - Contingency Requirements

Category	Contingency
SCOPE CATEGORY – Contingent sum attributed to quantities and scale	
Detailed take-off from detailed design drawings, detailed model and lists	7.5%
General take off from sketches, plot plans, general model, GAs, P&IDs and SLDs	10%
Estimated from plot plans, GA's and previous experience	12.5%
Factored from previous projects / ratios	20%
Allowance	25%
SUPPLY COST – Contingent sum attributed to supply and freight costs	
Awarded contract, purchase order and fixed price quotation	5%
Budget quotation	10%
In-house database	12.5%
Estimated value	15%
Factored value	20%
Allowance	25%
INSTALLATION COST – Contingent sum attributed to installation costs	
Awarded contract, purchase order and fixed price quotation	5%
Budget quotation	10%
In-house database	12.5%
Estimated value	15%
Factored value	20%
Allowance	25%

Contingency is calculated for each estimate line item according to the above categorization based on the following formula:

$$[A] = [0.4B + 0.4C + 0.2D]$$

Where:

- [A] = Contingency %
- [B] = Scope Category %
- [C] = Supply Cost Category %
- [D] = Installation Cost Category%

18.1.6 Escalation

Escalation factors has not been allowed in the estimate.

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18.1.7 Currency

The base currency of the estimate is in United States Dollars. The following conversions (see Table 18-3) have been used for both the OPEX and CAPEX estimates.

Table 18-3 - Currency Conversion

Base	Conversion
1 USD	1.26 CAD
1 USD	0.85 EUR
1 USD	1.38 AUD

18.2 PROJECT INTEGRATED CAPEX

The integrated project capital investment (CAPEX) has been performed for the mining, spodumene concentration, lithium hydroxide conversion plant and project infrastructure. Table 18-4 show the breakdown of the capex estimation based on the estimate plan described in the previous section.

Table 18-4 – Integrated Project Capex

Capex (mm \$)		Direct	Indirect	Grand Total
Area	Sub-Area			
Concentrator Operations				
	1100 - Mining	99.5		99.5
	1200 - Processing Plant	162.2		162.2
	1300 - Site Infrastructure	10.9		10.9
	1400 - Waste Rock	6.0		6.0
	Sub Total - Concentrator Operations	278.5		278.5
Lithium Hydroxide Operations				
	2200 - Overland Network	19.4		19.4
	2400 - LiOH Plant	431.3		431.3
	2900 - Site Infrastructure - LiOH Plant	13.7		13.7
	Sub Total - Lithium Hydroxide Operations	464.3		464.3
Indirect Costs				
	6100 - Concentrator Indirects		32.4	32.4
	6200 - Lithium Hydroxide Indirects		65.1	65.1
	Sub Total - Indirect Costs		97.5	97.5
Owners Cost, Pre-production & Working Capital				
	8100 - Owners Cost		73.6	73.6
	Sub Total - Owners Cost, Pre-production & Working Capital		73.6	73.6
	Grand Total			914.0

The deferred, working and sustaining capital is estimated at \$278 M. Sustaining and deferred capital includes:

- Capital recovery costs for in-pit crushing and overland conveyor system construction and maintenance of \$0.60 per ROM tonne for a total of \$152 M life of ore reserves;
- Other sustaining mining capital including:
 - \$0.3 M of site preparation;
 - \$54.4 M of future pre-strip expenses;
 - \$3.3 M of future land acquisition expenses to support the current estimated ore reserves.
- Mine closure and reclamation costs of \$19 M;
- Concentrator sustaining capital of \$10 M;
- Chemical Plant sustaining capital of \$39 M;

The working capital is estimated to be \$45 M.

18.3 OPEX BASIS OF ESTIMATE

The operating cost estimate (OPEX) has been performed for the mining, spodumene concentration and lithium hydroxide conversion plant. The following list of cost centers have been used for the estimation: Salaries; G&A; reagents; consumables; utilities (electricity, fuel, water, etc.); maintenance; treatment and disposal.

The parameters for the estimate used are as follows:

- Estimate Target Accuracy Initial Capital Costs +15% / -15%;
- Estimate Target Accuracy Sustaining Capital Costs +15% / -15%;
- Estimate Target Accuracy Operating Costs +15% / -15%;
- Estimate Base Date Q4 2021;
- Estimate Base Currency United States Dollars.

The target estimate accuracy is in accordance with AACE Class 3 estimate as per AACE standard 18R-87.

18.4 MINING OPEX

In addition to contract mining, a cost allowance of \$1.2 M per year has also been made for internal managerial and technical staff to support mining operations. Table 18-5 presents a detailed labor breakdown.

Table 18-5 – Mining and Geology Labor

Description	Number of Employees	Total Annual Labor Cost
Mining and Geology		
Mine Manager	1	\$189,280
Mining Engineer	3	\$463,008
Geology Supervisor	1	\$116,480
Field Geologist	4	\$349,440
Surveyor	1	\$89,360
Mining and Geology Total	10	\$1,207,568

18.5 CONCENTRATOR OPEX

The overall cost per year of operation, per metric tonne of ore, and per metric tonne of spodumene concentrate is described for the main parameters of the plant.

Table 18-6 presents a summary of the operating costs for the spodumene processing plant.

Table 18-6 – Spodumene Processing Plant OPEX Summary

Cost Center	Total Cost		
	US\$/year	US\$/t ore	US\$/t spod conc.
Labor (Process)	\$8,657,990	\$4.56	\$35.68
Operating Consumables and Reagents	\$8,951,905	\$4.72	\$36.89
Power	\$3,938,852	\$2.08	\$16.23
Maintenance Supplies	\$1,059,145	\$0.56	\$4.36
Mobile Equipment	\$593,367	\$0.31	\$2.45
Concentrate transport	-	-	-
Laboratory	\$164,679	\$0.09	\$0.68

Water Treatment	\$790,986	\$0.42	\$3.26
General & Administration	\$507,349	\$0.27	\$2.09
Total	\$24,664,273	\$13.00	\$101.64

The basis of the data sources, assumptions, cost inclusions and exclusions for the process operating costs are as follows.

18.5.1 Manpower

An allowance has been made for production, maintenance and management personnel associated with running the processing plant.

Roster is mainly based on a 12 hours per shift, 2 shifts per day, and 4 rotating crews. Once steady operation has been achieved, the manning levels will reflect previous experience at similar lithium operations.

Further rationalization and operational numbers during ramp-up should be reviewed in the DFS. A detailed labor breakdown is described in Table 18-7.

Table 18-7 – Concentrator Labor Breakdown

Plant	Description	Number of Employees	Total Annual Labor Cost
Plant Operations			
Spodumene	Plant Manager	1	\$189,280
Spodumene	Process Engineer	1	\$154,336
Spodumene	Plant Supervisor	4	\$616,608

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Plant	Description	Number of Employees	Total Annual Labor Cost
Spodumene	Control Room Operator	4	\$465,184
Spodumene	Crushing Operator	4	\$404,614
Spodumene	DMS and Grinding Operator	4	\$434,899
Spodumene	Flotation Operator	8	\$869,798
Spodumene	Dewatering / Loadout Operator	8	\$809,229
Spodumene	Utility Operator	2	\$120,480
Spodumene	Plant Laborer	8	\$718,374
Spodumene	Mobile Equipment Operator	8	\$869,798
Spodumene	Safety / Training Supervisor	2	\$190,368
Spodumene	Receiving Warehouse Lead	1	\$107,997
Spodumene	Receiving Warehouse Worker	1	\$96,640
Maintenance			
Spodumene	Maintenance/Reliability Manager	1	\$189,280
Spodumene	Maintenance Supervisor	1	\$153,424
Spodumene	Maintenance Planner	1	\$123,139
Spodumene	Millwright / Mechanic	2	\$155,424
Spodumene	Millwright / Mechanic	2	\$161,248
Spodumene	Electrical / Instrumentation Supervisor	1	\$153,424
Spodumene	Electrical / Instrumentation Technician	2	\$190,368
Spodumene	Electrical / Instrumentation Technician	2	\$196,192
Spodumene	Electrical / Instrumentation Planner	1	\$123,139
Chemical Laboratory			
Spodumene	QC Supervisor	1	\$110,656
Spodumene	QC/R&D Lead	4	\$404,614
Spodumene	QC Technician	4	\$359,187
Spodumene	Dayshift QC Technician	1	\$68,976
Metallurgy			
Spodumene	Metallurgist	2	\$221,312
Concentrator Total		81	\$8,657,990

The total concentrator manpower cost per year is \$8.70 M which consists of dedicated and share personnel between the spodumene and by-products plant.

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18.5.2 Operating Spares and Consumables

Costing for crushers liners, screen panels, mill liners, grinding balls, filter press parts, and reagents have been included in operating consumables. Assumptions are based upon Primero's recent lithium experience at a similar processing facility and vendor operating spares quotes.

Costs for conveyor and chute work maintenance are included in maintenance supply cost estimates. An allowance has been incorporated for first fills and opening stocks under capital costs associated with pre-production.

Operating consumables cost is estimated as \$6.3 M per year for the spodumene processing plant Reagents

The reagents costs are included in the operating consumables expense. The breakdown of the reagent quantities, unit price, and total cost is described in Table 18-8.

Table 18-8 – Concentrator Reagent Consumption and Annual Cost

Plant	Operation	Reagent	Consumption Rate	Total Cost Per Year
Spodumene Processing Plant	DMS	FeSi - 270D	500 g/t ore	\$1,629,422
	Mica Flotation	Collector - Armac Mix	110 g/t ball mill feed	\$430,918
		Frother - MIBC	20 g/t ball mill feed	\$50,691
		pH Modifier - NaOH	235 g/t ball mill feed	\$259,906
		High Intensity Scrubbing and Desliming	Dispersant - F220	250 g/t ball mill feed
	Spodumene Flotation	pH Modifier - NaOH	219 g/t ball mill feed	\$242,211
		Collector - FA-2	625 g/t ball mill feed	\$1,281,674
	Thickening and Dewatering	pH Modifier - Na ₂ CO ₃	142 g/t ball mill feed	\$93,444
Flocculant - Magnafloc 10		20 - 60 g/t thickened feed	\$55,777	
Water Treatment Plant	Precipitation	Lime - CaCO ₃	259 t/annum	\$412,370
	Carbon Adsorption	Coconut shell carbon	1,704 t/annum	\$1,038,342
<i>Spodumene Processing Plant</i>				<i>\$4,274,456</i>
<i>Water Treatment Plant</i>				<i>\$1,450,712</i>
Concentrator Total				\$5,725,168

18.5.3 Power Cost

The power OPEX calculation utilized a value of 5.7 cents per kWh based upon an estimate provided by PLL and a load factor of 0.8.

Power consumption and costs are determined based on calculated plant utilization and the mechanical equipment list. The estimated total installed power for the spodumene processing plant is 12.8 MW (including water treatment plant). An allowance of 640 kW has also been made for lighting, heating, and ancillary buildings.

Overall, power consumption for the concentrator is expected to be 70.0 GWh per year for a total power cost of \$4.0 M per year.

18.5.4 Plant Maintenance

Maintenance costs are estimated at \$1.1 M per year to account for conveyor and chute work maintenance for the spodumene processing plant.

18.5.5 Mobile Equipment

The mobile equipment cost summary is split between fuel cost and maintenance and repair costs. The yearly mobile equipment costs for the spodumene processing plant has been estimated as \$593,367.

An additional allowance of \$16,745 per year has been made for vehicles for the administration department, which is included in site-wide general and administration operating costs.

18.5.6 Concentrate Transport

An overland conveyor is included in the project CAPEX to transport spodumene concentrate to the downstream chemical plant. The OPEX associated with the operation on the overland conveyor is included in the chemical plant operating costs and thus is not included in the concentrator operating cost estimate.

18.5.7 Laboratory

Laboratory sample and general analysis operating expenses are priced at \$164,787 per year for the spodumene processing plant. Additional allowance for third party testing of \$61,440 per year has been made under the administration cost for the spodumene processing plant.

18.5.8 Concentrator General and Administration

The concentrator general and administration costs include first aid, medicals, personal protective equipment (PPE), recruitment, third-party metallurgical testing, and training.

The yearly general and administration costs for spodumene processing plant is \$507,349.

18.5.9 Water Treatment

The water treatment facility yearly operating costs is estimated at \$2.0 M. The basis of the water treatment plant is vendor provided quotes (operating spares and DAF reagents), estimated reagents for precipitation and carbon adsorption, and power consumption.

18.5.10 Site-Wide General and Administration

A cost allowance of \$2.7 M per year has been made to account for site-wide general administration costs. The items including manpower for departments such as health, safety, and environment (HSE), management, logistics, and human resources.

Additionally, cost items for the site, such as telecommunications, third-party environmental testing / consultants, security, and office cleaning contracts, are included under general G&A.

Table 18-9 – Site-Wide General and Administration Costs

Cost Center	Total Cost		
	US\$/year	US\$/t ore	US\$/t spod conc.
G&A - Labor HSE	\$530,160	\$0.28	\$2.18
G&A - Labor Management	\$316,496	\$0.17	\$1.30
G&A - Labor Shipping & Logistics	\$656,288	\$0.35	\$2.70
G&A - Labor HR	\$297,024	\$0.16	\$1.22
General G&A	\$904,425	\$0.48	\$3.73
Total	\$2,704,393	\$1.43	\$11.14

18.6 CONVERSION PLANT OPEX

The overall cost per year of operation, per metric tonne of feed, and per metric tonne of final lithium hydroxide monohydrate product is described for the main parameters of the plant.

Table 18-10 presents a summary of the operating costs for the chemical conversion plant.

Table 18-10 – Chemical Conversion Plant OPEX Summary

Cost Center	Total Cost		
	US\$/year	US\$/t feed	US\$/t final product
Labor (Process)	\$10,006,330	\$51.31	\$333.54
Operating Consumables	\$30,514,318	\$156.48	\$1,017.14
Power	\$6,428,614	\$32.97	\$214.29
Maintenance Supplies	\$3,211,137	\$16.47	\$107.04
Mobile Equipment	\$304,276	\$1.56	\$10.14
Laboratory	\$2,099,846	\$10.77	\$69.99
General & Administration	\$762,865	\$3.91	\$25.43
Total	\$53,327,385	\$273.47	\$1,777.58

The basis of the data sources, assumptions, cost inclusions and exclusions for the process operating costs are as follows.

18.6.1 Manpower

An allowance has been made for production, maintenance and management personnel associated with running the processing plant.

Roster is mainly based on a 12 hours per shift, 2 shifts per day, and 4 rotating crews. Once steady operation has been achieved, the manning levels will reflect previous experience at similar lithium operations.



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Further rationalization and operational numbers during ramp-up should be reviewed in the DFS. A detailed labor breakdown is described in Table 18-11.

Table 18-11 – Chemical Labor Breakdown

Description	Number of Employees	Total Annual Labor Cost
Management		
Plant Manager	1	\$189,280
Plant Operations		
Production Supervisor	4	\$465,920
Safety/Training Supervisor	1	\$116,480
Process Engineer	1	\$154,336
Control-room Operator	8	\$930,368
Relief Operator	8	\$869,798
Packer/Production Helper	20	\$1,947,360
Shipping Workers	2	\$137,952
Receiving Warehouse Lead	1	\$96,640
Receiving Warehouse Worker	1	\$89,069
Material Lead	1	\$96,640
Material Handlers	3	\$267,206
Maintenance		
Maintenance Supervisor	1	\$116,480
Mechanical Maintenance Lead	1	\$134,496
Millwright / Mechanic	6	\$466,272
Millwright / Mechanic Night Shift Only	4	\$322,496
Maintenance / Planner	1	\$123,139
Electrical / Instrumentation Supervisor	1	\$153,424
Electrical / Instrumentation lead	1	\$134,496
Electrical / Instrumentation Technician	6	\$571,104
Electrical / Instrumentation Technician Night Shift Only	2	\$196,192
Electrical / Instrumentation Planner	1	\$123,139
QC Laboratory		
QC Supervisor	1	\$110,656
QC Lead	4	\$404,614
QC Technician	8	\$718,374
R&D Technician (special Projects)	1	\$81,536
Utilities		
Utilities Supervisor	1	\$101,920

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Description	Number of Employees	Total Annual Labor Cost
Wastewater Treatment	4	\$389,472
Boiler room Operator	4	\$389,472
Relief Operator	1	\$107,997
Chemical Total	99	\$10,006,330

The total chemical manpower cost per year is \$10.0 M for the 99 employees.

18.6.2 Operating Spares and Consumables

Costing for Metso:Outotec equipment spares, mill liners, filter cloths, and reagents have been included in operating consumables. Assumptions are based upon Primero's recent lithium experience, Metso:Outotec proprietary knowledge, and vendor operating spares quotes.

Costs for conveyor and chute work maintenance are included in maintenance supply cost estimates. An allowance has been incorporated for first fills and opening stocks under capital costs associated with pre-production.

Operating consumables cost is estimated as \$30.5 M per year for the chemical conversion plant.

18.6.3 Reagents

The reagents costs are included in the operating consumables expense. The breakdown of the reagent quantities, unit price, and total cost is described in Table 18-12.

Table 18-12 Chemical Reagent Consumption and Annual Cost

Operation	Reagent	Consumption Rate	Total Cost Per Year
Carbonate Leaching	Sodium Carbonate	5.68 t/h	\$11,723,684
Conversion	Calcium Hydroxide	4.47 t/h	\$6,458,882
Ion Exchange	Hydrochloric Acid	0.40 t/h	\$594,000
	Sodium Hydroxide	0.09 t/h	\$352,309
	Resin	30 t/change	\$159,000
Crystallization	Sulfuric Acid	5 t/annum	\$1,213
	Carbon Dioxide	0.26 t/h	\$516,750
Lithium Phosphate Precipitation	Trisodium Phosphate	0.22 t/h	\$1,650,000
Chemical Total			\$21,455,837

18.6.4 Power Cost

The power OPEX calculation utilized a value of 5.7 cents per kWh based upon an estimate provided by PLL and a load factor of 0.8.

Power consumption and costs are determined based on calculated plant utilization and the mechanical equipment list. The estimated installed power is 3.1 MW for the chemical balance of plant, 1.2 MW for the calcination circuit, and 13.7 for the hydrometallurgical and crystallization circuits. An allowance of 900 kW has also been made for lighting, heating, and ancillary buildings.

Overall, power consumption for the chemical plant is expected to be 113.0 GWh per year for a total power cost of \$6.4 M per year.

18.6.5 Plant Maintenance

Maintenance costs are estimated at \$3.2 M per year to account for the overland conveyor, chute work, piping, and valving maintenance for chemical plant.

18.6.6 Mobile Equipment

The mobile equipment cost summary is split between fuel cost and maintenance and repair costs. The yearly mobile equipment costs for the chemical conversion plant have been estimated as \$304,276.

18.6.7 Laboratory

Laboratory sample and general analysis operating expenses are priced at \$2.1 M per year. Additional allowance for third party testing of \$57,910 per year has been made under the administration cost for the chemical plant.

18.6.8 Chemical General and Administration

The chemical general and administration costs include first aid, medicals, personal protective equipment (PPE), recruitment, third-party metallurgical testing, and training.

The yearly general and administration costs for spodumene and by-products processing plant is \$762,865.

The site-wide general administration items including manpower for departments such as health, safety, and environment (HSE), management, logistics, and human resources is included in the concentrator OPEX.

19 ECONOMIC MODEL AND SENSITIVITY ANALYSIS

19.1 ECONOMIC MODEL

A detailed financial model and discounted monthly cash flow (DCF) has been developed to complete the economic assessment of the project and is based on current (Q4 2021) price projections and cost estimates in U.S. dollars. No provision was made for the effects of inflation, but cost estimates incorporate recent inflationary price increases. The evaluation was carried out on a 100%-equity basis using an 8% discount factor. Current US federal and North Carolina state tax regulations were applied to assess the corporate tax liabilities.

The key project production values are presented in Table 19-1.

Table 19-1 Project Economics Summary

Base Case Financial Results	Unit of Measure	Value
Pre-Tax NPV @ 8%	\$ M	1,489
After-Tax NPV @ 8%	\$ M	1,183
Pre-Tax IRR	%	25.1

After-Tax IRR	%	23.0
Pre-Tax Payback Period	Years	6.13
After-Tax Payback Period	Years	6.13

The main project economic indicators are presented in Table 19-2. The economic study shows a net profit after tax (NPAT) of \$3,238 M. The net present value of the 14-year based project is \$1,183 M at an 8% discount rate and after applicable taxes. The after-tax internal rate of return (IRR) is 23.0%

Table 19-2 Project Cash Flow and Profitability Summary

Income Statement	Project
	\$ million
Gross revenues (LiOH, SC6 and by-products)	6,980
Net revenues after royalties	6,960
Operating cost cash flow	(1,702)
Head office allocation	(112)
EBITDA	5,127
Capital expenditure (pre-production)	(914)
Sustaining and deferred capital	(278)
Gross profit before tax (EBT)	3,967
Tax	(729)
Net Profit After Tax (NPAT)	3,238

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19.2 SENSITIVITY ANALYSIS

The major financial assumptions used in the base case are given in Table 19-4. The project forecasts are based on a sale price for the Battery Grade Lithium Hydroxide product of \$18,000/t. Various Sales forecasts as outlined in Table 19-3 were examined to decide the final sale price utilized in the base case and the rate chosen represents a 42% discount to the current spot price (December 2021) of Lithium Hydroxide. Details on the derivation of this price forecast are given in section 19.3 below. The sensitivity analysis examines a range of prices 30% above and below this base case forecast.

Table 19-3 LiOH Price Forecasts

Price Forecasts for Battery Grade LiOH US\$/t	2022	2023	2024	2025
Benchmark Minerals	20,600	26,200	25,200	20,900
J.P. Morgan	26,625	22,500	19,737	18,420
Macquarie	21,275	20,415	18,545	17,540

The base case was carried out on a 100 % equity basis regardless of how the project will be financed. A discount factor of 8 % was chosen as a reflection of the cost of equity and this is the most widely used discount factor for comparative project analysis.

The tax rates utilized in the financial model are based on current federal and state tax laws. The current federal tax rate is 21 % and the current North Carolina Tax rate is 2.5 % but it reduces to 0 % between 2024-2028.

There has been an allowance for a bonus depreciation deduction based on the bonus depreciation allowance in the Tax Cuts and Jobs Act of 2017, which is 100 % in 2022 and reduces to 0 % by 2027. Depreciation in the concentrate operations is based on Asset Class 10.0 - Mining in IRS Table B-1 using the general depreciation system ("GDS") over 7 years with the double declining balance method. Depreciation in the chemical plant is based on Asset Class 28.0 - Mfg. of Chemical and Allied Products in Table B-1 using GDS of 5 years with the double declining balance method.

There is an allowance of \$1.00 per ROM Ore tonne for royalties based on Piedmont's direction based on the average land option agreement. No other government royalty payments are expected at this time.

Table 19-4 Financial Assumptions

Item	Unit of Measure	Value
Lithium Hydroxide Sale Price	\$/t	18,000
Discount Factor	%	8
Applicable Tax Rate	%	22.98-21.00
Royalties	\$/t	1
Spodumene Depletion	%	22

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Item	Unit of Measure	Value
Mine / Concentrator Depreciation		7 Year Double Declining Method
Conversion Plant Depreciation		5 Year Double Declining Method

19.3 TECHNICAL ASSUMPTIONS

The main technical assumptions in the model are outlined in Table 19-5 below.

The total mine life in the model is 11 years and 1 month with the first 5 years of the mine plan scheduled quarterly before reverting to annually for the remaining 6 years. The concentrator commences operations at the same time as mining commences and has a ramp up period of 8 months before it reaches nameplate production. The Chemical Plant commences 3 months after mining operations commence with a ramp up period of 12 months before reaching nameplate production. The chemical plant is assumed to have a life of 14 years once the mineral reserves are depleted and any stockpile of spodumene concentrate is consumed.

Table 19-5 Project Production Summary

Production Summary	Value	Units
Mill feed mined	20.1	Mt
Waste mined	232.5	Mt
Total material mined	252.6	Mt
Mine life	11.1	years
Chemical Plant Life	14	years
Average strip ratio (waste:ore)	11.6	(w:o)
Spodumene Concentrate Produced	2.56	Mt
LOM Average Li ₂ O grade (diluted)	1.00	% Li ₂ O
Average Li ₂ O recovery	77	%
LOM average annual ore production	1.81	Mtpa
LiOH:H ₂ O Recovery	91	%
Lithium Hydroxide (LiOH) Total Production	388	kt

19.4 FINANCIAL MODEL AND CASHFLOW

Real project yearly and cumulative cashflows can be seen in Figure 19-1. Total cash generated by project at the end of project life of \$3,238 m and the after-tax payback period including construction phase equates to 6.13 years

Financial Model (yearly)	Year	Total	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Production - Mining																		
Total Material Moved	Mt	252.5	-	-	12.7	28.5	25.4	24.3	24.5	13.9	27.7	29.0	23.4	22.3	18.8	2.0	-	-
Total Ore	Mt	20.1	-	-	1.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.1	-	-
Production - Process Plant																		
Spodumene	kt	2,555	-	-	120	256	234	225	252	250	225	233	236	251	255	18	-	-
LiOH·H ₂ O Production	kt	388	-	-	2.0	26.5	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.3
Gross Revenue																		
Spodumene	US\$mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LiOH·H ₂ O Battery Grade	US\$mm	\$6,979.3	-	-	\$35.8	\$476.6	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$540.0	\$527.0
LiOH·H ₂ O Technical Grade	US\$mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Revenue	US\$mm	\$6,979.3	-	-	\$35.8	\$476.6	\$540.0	\$527.0										
Capital Expenditure																		
Total CAPEX	US\$mm	\$914.1	\$256.1	\$588.4	\$69.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenditure																		
Total OPEX	US\$mm	\$1,702.3	-	\$2.0	\$73.6	\$160.9	\$150.1	\$149.6	\$149.0	\$119.0	\$155.4	\$158.8	\$144.2	\$141.1	\$131.9	\$60.9	\$53.3	\$52.5
Royalties	US\$mm	\$20.09	-	-	\$1.0	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$0.1	-	-
Head Office Allocation	US\$mm	\$112.00	-	-	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0
Mine Closure Costs	US\$mm	\$18.76	-	-	-	-	-	-	-	-	-	-	-	-	-	\$17.2	\$1.6	-
Sustaining Capital																		
Total Sustaining Capital	US\$mm	\$258.78	-	-	\$23.6	\$43.8	\$25.5	\$14.6	\$19.8	\$42.5	\$17.8	\$17.4	\$21.6	\$13.4	\$12.5	-	\$6.3	-
Depletion, Depreciation, and Tax																		
EBITDA	US\$mm	\$5,126.5	-	-\$2.0	-\$46.7	\$305.9	\$380.0	\$380.5	\$381.1	\$411.0	\$374.7	\$371.3	\$385.9	\$389.0	\$398.2	\$453.7	\$477.1	\$466.8
Depreciation Allowance	US\$mm	\$1,159.5	-	-	\$648.3	\$114.8	\$80.5	\$56.1	\$44.6	\$41.0	\$38.1	\$31.4	\$27.3	\$23.9	\$20.2	\$30.1	\$2.6	\$0.6
Depletion	US\$mm	\$506.1	-	-	\$23.7	\$50.7	\$46.4	\$44.6	\$49.8	\$49.6	\$44.6	\$46.2	\$46.7	\$49.8	\$50.4	\$3.6	-	-
Interest Expense	US\$mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxable Income	US\$mm	\$3,460.9	-	-\$2.0	-\$718.7	\$140.3	\$253.1	\$279.7	\$286.7	\$320.5	\$292.1	\$293.7	\$312.0	\$315.3	\$327.6	\$420.0	\$474.5	\$466.2
Tax	US\$mm	\$728.7	-	-	-	-	-	\$52.1	\$67.3	\$61.3	\$61.7	\$65.5	\$66.2	\$68.8	\$88.2	\$99.6	\$97.9	-
Net Profit After Tax	US\$mm	\$3,238.3	-	-\$2.0	-\$695.0	\$191.0	\$299.5	\$324.4	\$284.4	\$302.7	\$275.3	\$278.2	\$293.1	\$298.9	\$309.2	\$335.4	\$374.9	\$368.3

Figure 19-1 - After Tax Cash Flow Analysis

DCF Notes;

Metallurgy Calculations

1. Concentrator –

a. The Concentrator Li production as SC6 has been based on the based-on Head Grades recovery curves, and ramp-up rates.

b. Ramp-up –

$$Li\ Yield = 2E-06[T]^5 - 0.0001[T]^4 + 0.004[T]^3 - 0.0521[T]^2 + 0.3565[T] - 0.1439, [T]=time\ in\ month$$

The yield aligns with McNulty ramp-up rates for a Series 1. Primero has confidence this will be achievable in the concentrator.



c. Post Ramp-up

$$Li\ yield\% = 24.71 * 0.0122 * 100 + 52.39 / 100\ when\ LiHG > 0.0122, \ and\ LiHG = Li\ head\ grade\ (\%)/100$$

$$Li\ yield\% = 24.71 * LiHG * 100 + 52.39 / 100\ when\ LiHG < 0.0122\ and\ LiHG = Li\ head\ grade\ (\%)/100$$

d. The recovery over the varying feed grades (lithium recoverable) aligns within ranges Primero has seen in other lithium concentrator operations.

2. Converter

a. Conversion is based on a fixed recovery (91%), but with Yield being significantly reduced to account for throughput, reprocessing.

b. Ramp-up

$$Li\ Yield = 0.0001[T]^3 - 0.0082[T]^2 + 0.1676[T] - 0.1767, T = time\ in\ months$$

This is a rate that the technology provider (MO) has provided.

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19.5 SENSITIVITY ANALYSIS

Primero has studied the economical models' sensitivity regarding a variation of:

- Capital cost;
- Operating cost;
- Spodumene Recovery;
- Lithium Hydroxide Recovery;
- Product Pricing.

The results are summarized in Figure 19-2 & Figure 19-3.

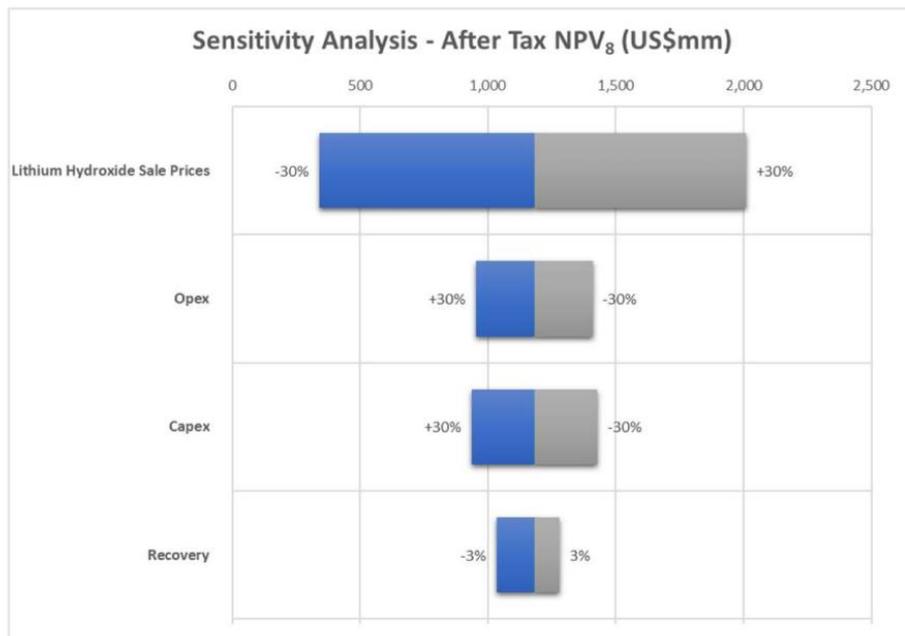


Figure 19-2 - Sensitivity Analysis After-Tax NPV₈

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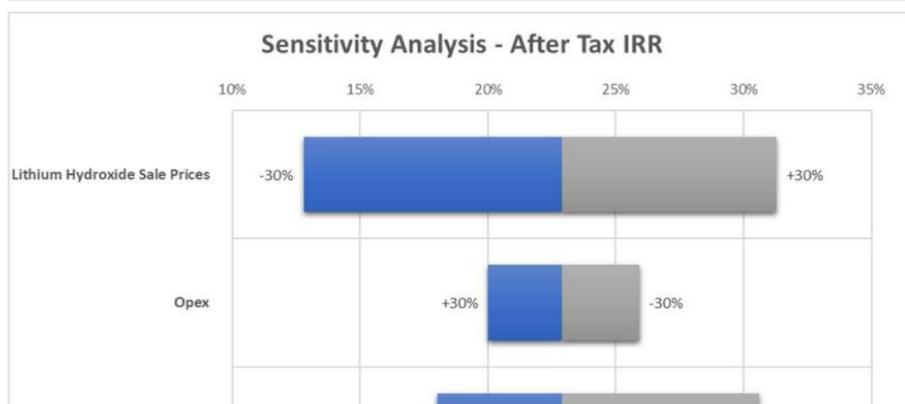




Figure 19-3 - Sensitivity Analysis After-Tax IRR

The results are showing that the NPV and the IRR are:

- Sensitive to Lithium Hydroxide selling price and the IRR is sensitive to variability in CAPEX costs
- Less sensitive to variations in OPEX and process recovery

20 ADJACENT PROPERTIES

The adjacent properties are generally privately held parcels of land. From a geological perspective, these properties all fall within the Inner Piedmont Belt (e.g. Gair, J.E., 1989. "Mineral resources of the Charlotte 1°x2° quadrangle, North Carolina and South Carolina. U.S. Geological Survey professional paper 1462).

No specific mineral resource related information was found.

21 OTHER RELEVANT DATA AND INFORMATION

This section describes the project implementation and the organization of the operations.

21.1 PROJECT IMPLEMENTATION

The Project consists of the following major areas:

- Mine development, including haul roads, magazine, pit dewatering, in-pit crushing and ore overland conveyor;
- Lithium Spodumene concentrate process facility
- Lithium Spodumene Conversion Plant;
- Infrastructure to support construction, mining, processing and conversion operations.

For the project implementation, PLL would form an Integrated Project Management Team (IPMT) which would provide overall project management. The key management requirements are to:

- Define and document organization structure and individual positions, including responsibility for establishing and reporting, in accordance with the project management system;
- Ensure sufficient and appropriate resources are applied on the Project;

- Provide clear and mutually compatible position descriptions with authority and responsibilities levels detailed including expenditure and correspondence limits.

The IPMT would be comprised of PLL's employees and consultants as required. Figure 21-1 represents the planned organizational structure of the IPMT.

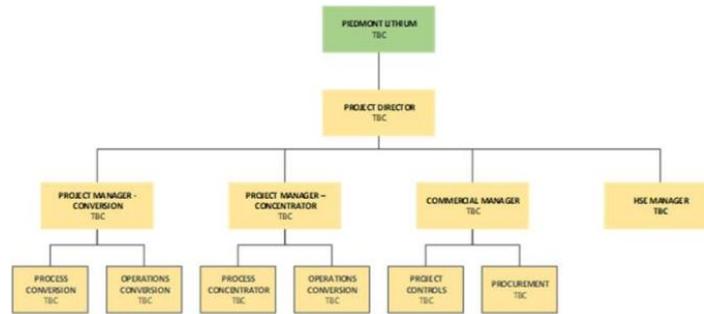


Figure 21-1 - The IPMT organizational structure chart

PLL would be responsible for the overall project management. PLL's key areas of responsibilities would be as follows:



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- Managing large EPC contracts;
- Obtaining and management of necessary permits and approvals for the Project;
- Preparation of overarching standards and procedures;
- Scope preparation, tendering, award, contract administration and closeout of large EPC contracts;
- Technical review of engineering for compliance with PLL requirements;
- Interface management between contractors;
- Establishment of the operations and mining teams;
- Procurement of spare parts based on spare parts list provided by the suppliers;
- Operational readiness.

Primero would be assigned to be responsible for the following activities:

- FEED management and execution;
- Project controls;
- Planning and scheduling;
- Engineering and design;
- Procurement activities;
- Finalizing estimating (CAPEX and OPEX) during FEED;
- Constructability planning activities;
- Risk management;
- Supervision of installation contractors;
- QA/QC;
- Commissioning;
- Handover to operations.

Other contractors to be engaged by PLL would be responsible for engineering & design, testing, permitting activities and design & supply of the following project areas:

- Mining, waste, tailings and civil.
- Geotechnical and environmental.
- Conversion technology partner (Metso:Outotec)
- Infrastructure utilities (electric power, natural gas, municipal water supply; sewage).

21.1.1 Engineering and Design

All engineering and design works should be conducted as per contractors' own design procedures and in accordance with the relevant legislation and standards noted in Scope of Works document. The design should be performed to deliver the Project in accordance with the Process Design Criteria and Basis of Design.

The project execution would commence with the contractors carrying out Front End Engineering & Design (FEED). The FEED would allow time for various trade-off studies, optimizations and further investigations required prior to detailed engineering.

The Final Investment Decision (FID) would be the trigger for detailed engineering and design. Each contractor should prepare a detailed Engineering Management Plan covering their scope prior to commencement which

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would outline all responsibilities, design processes, performance requirements and design inputs. The plan should ensure that the products of the design process meet all PLL, legislative, contractor's own and other requirements.

Procurement Plan

The IPMT would be responsible for establishing the overarching procurement and contracts requirements for the Project including the development and maintenance of a detailed procurement and contracts register (PCR) for the items procured directly by PLL.

Each contractor would be responsible for preparing a Procurement and Contracting Plan which would outline procurement strategies and processes to be used to comply with project requirements and to achieve project goals. Contractors would also prepare and maintain a PCR for the procurement items within their scope. A list of suitable tenderers for each package in the contractors' PCRs should be vetted and approved by the IPMT prior to issuing of tenders in accordance with applicable procurement procedures and requirements and contract provisions.

Each contractor would be responsible for the following procurement and subcontract activities:

- Development and maintenance of the PCR;
- Development and maintenance of a procurement and contracts status report to track procurement progress and to provide input for the progress schedule;
- Preparation of all tender documentation including request for quotations (RFQ's), pro-forma contracts and associated tender schedules (pricing, manning, equipment, variation rates, etc.);
- Carrying out tender evaluations on all packages including clarification meetings as required;
- Preparation of formal RFAs for PLL review and approval as required by their contract;
- Contract negotiations;
- Issuing Purchase Orders.

Once purchase orders have been placed with selected suppliers, contractors would be responsible for expediting and management of all vendor documentation, QA/QC, RFI's, variation requests, progress claims and final delivery of equipment to site. Contractors' project manager along with the on-site construction management team would manage and expedite all site installation subcontracts.

Ongoing gap analysis would be carried out during the procurement phase to ensure that battery limits between packages are clearly defined and that there no gaps in scope.

US, local and women, minorities and veteran owned vendors would be prioritized when feasible and no significant risks regarding quality, cost or schedule impacts on the Project are present. Vendors based in areas where it would be harder to perform inspections or may lead to freight forwarding issues would be avoided when possible.

Procurement packages would be structured to minimize commitments and payments without the realization of tangible progress with milestone payments linked to submission of general arrangement drawings and vendor documents and data critical to design and engineering, material and equipment purchase orders, final inspections, or factory acceptance testing (FAT), delivery and finally submission of closeout documentation (MDR's and O&M's), as applicable.

To facilitate FEED and detailed design and engineering progress and to reduce schedule risk, the IPMT with cooperation from the contractors would identify and evaluate major equipment packages with expected long lead times and of critical importance to the project schedule. Where feasible and appropriate, early

orders would be placed to secure vendor design data required to advance FEED and detailed design and to secure critical equipment delivery dates.

Formal technical and commercial evaluations would be completed for these packages and should be issued to the IPMT with a recommendation for final approval if such approval is required. Justification should be provided in the evaluations for any sole sourced packages.

21.1.2 Planning and Scheduling

A summary level integrated Level III logic-driven schedule would be developed covering all major areas of the Project. The integrated project schedule would be supported and based on contractors’ Level IV logic-driven schedules developed for their respective scopes. The scheduling software would be Primavera P6 or similar. The IPMT would provide initial Level I key PLL deliverable dates to be included into the integrated project schedule as relevant to contractors’ execution schedules.

21.1.3 Project Master Schedule

Figure 21-2 - Project Schedule illustrates the project schedule.

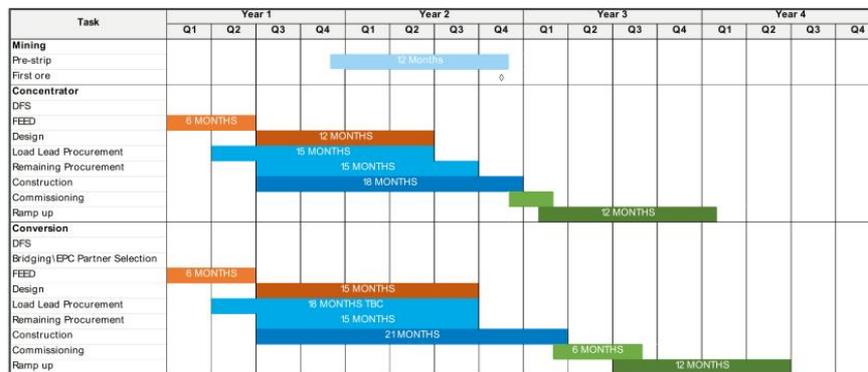


Figure 21-2 - Project Schedule

21.1.4 Critical Path

The anticipated longest path through the schedule starts with the financial approval and the notice to proceed with design works. Critical to the progress of design works is the receipt of engineering drawings and data for critical process equipment and placement of orders for the equipment with the longest lead times. The critical path then flows through detailed design by discipline (civil, structural, mechanical, piping, electrical and controls) followed by construction, pre-operational verification (POV) and commissioning activities for the Conversion Plant.

Contractors’ Level IV schedules would identify critical path for the individual scopes of each contractor. Integrated project summary Level III schedule would show the overall project critical path.

21.1.5 Construction

Contractors’ construction management teams, led by the construction managers, would be based at the Project site and would be responsible for the overall management of each contractor’s respective sites and ensure that all construction activities are carried out safely and efficiently in line with project requirements.

The IPMT would also include site-based team members to provide overarching management and support for contractors.

Clear and detailed construction planning would be critical in ensuring that the construction phase is executed safely and on time, facilitating a smooth and definite transition into full operations. A Construction Management Plan would be prepared by each contractor for their scope of work and submitted to the IPMT for review, comment and approval. The Construction Management Plan would address in detail the means and methods by which construction phases would be carried out, managed, and controlled. In addition to the Construction Management Plan a constructability review would be carried out to optimize sequencing of construction activities as the design work progresses.

Communications on-site would be paramount for safe and successful construction management and to ensure that all relevant parties are informed of any site activities that may affect the safety or efficiency of their works.

Site kick-off meeting would cover site rules, safety and emergency procedures, contractor’s work area(s) and

interface points with other parties as well as identify contact persons for PLL and other contractors.

Contractors would hold weekly contractor meetings as well as interface meetings (as frequently as required) where each construction superintendent from all the contractors would meet and discuss safety, progress and interface issues or concerns.

21.1.6 Commissioning and Start Up

The Project commissioning process would be broken down into the following stages.

- Factory acceptance testing (FAT);
- Commissioning preparation;
- Construction verification;
- No-Load (Dry) commissioning;
- Load (Wet) commissioning;
- Process (Ore) commissioning.

21.1.7 Occupational Health, Safety and Environment

A primary focus for the IPMT is to promote a positive HSE culture at all levels of the Project and to ensure that a safe system of work is established and maintained for the protection of personnel, environment and the public during the execution of the Project.

Project Health, Safety and Environmental Management Plan (HSE Plan) would be strictly followed to ensure that all PLL employees, contractors and sub-contractors understand and adhere to all HSE expectations as well as federal, state and local health, safety and environmental regulations. Every contractor should develop a project

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specific HSE plan which would align with PLL's Project HSE Plan and would meet or exceed PLL's and legislative health, safety and environmental performance standards. All contractors and sub-contractors would be required to sign on to and comply with the Project HSE Plan prior to mobilizing to site.

- The HSE plan should include specific details to the following:
- Governing codes, standards, etc;
- Objectives, metrics and performance standards;
- Organization structure and responsibilities;
- Hazard and risk management planning;
- Implementation of policies, plans and procedures;
- Monitoring, evaluation, audits and review.

21.2 ORGANIZATION

Organization charts would be developed later by PLL for the mine, concentrator & by-product plants and the lithium conversion plants.

21.2.1 General Management

The types of activities considered for operations are as follows:

- General management;
- Administration;
- Human resources;
- Health, safety and environment;
- Security and emergency response;
- Process plant operations;
- Mining operations;
- Exploration and geology;
- Mine planning;
- Supply management;
- Transport and logistics;
- Maintenance and surface services (process equipment, mobile equipment, infrastructure, housekeeping);
- Laboratory testing;
- Storage (spare parts in warehouse and various bulk materials in stockpiles).

The entire operations workforce would be under the control of a general manager who would be supported by six main departments each headed by a manager.

- Conversion plants manager;
- Process plant manager;
- Mine manager;
- Exploration, geology and mine planning manager;
- Admin, store and supply manager;
- HR and HSE manager.

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21.2.2 Lithium Hydroxide Conversion Plant Department

The lithium hydroxide plant department is responsible for the day-to-day operation of the plant to ensure budgeted tonnage and lithium hydroxide production are achieved. The process plant manager would be responsible for the department and would be assisted operationally by the operation superintendent and metallurgist, who would coordinate the activities of the plant.

In addition to production duties, the lithium hydroxide plant manager would be responsible for the maintenance of all fixed equipment. The maintenance superintendent would report to the process manager. The senior metallurgist would oversee the on-site laboratory.

The role of the maintenance section would be to maintain the fixed equipment in safe and good working order. This would incorporate maintenance planning including preventative maintenance and would require close liaison with the production department.

The maintenance department staffing levels would be adequate to handle most repairs and rebuild tasks; for major tasks, additional resources such as suitable contractors or additional temporary labor may be required to work under the direction of the maintenance supervisors.

21.2.3 Concentrator Department

The concentrator department is responsible for the day-to-day operation of the plant to ensure budgeted tonnage and concentrate production are achieved. The process plant manager would be responsible for the department and would be assisted operationally by the operation superintendent and metallurgist, who would coordinate the activities of the plant.

In addition to production duties, the process plant manager would be responsible for the maintenance of all fixed equipment. The maintenance superintendent would report to the process manager. The senior metallurgist would oversee the on-site laboratory.

The role of the maintenance section would be to maintain the fixed equipment in safe and good working order. This would incorporate maintenance planning including preventative maintenance and would require close liaison with the production department.

The maintenance department staffing levels would be adequate to handle most repairs and rebuild tasks; for major tasks, additional resources such as suitable contractors or additional temporary labor may be required to work under the direction of the maintenance supervisors.

21.2.4 Mining Department

The mining department responsible for all mining activities, with the structure of the department developed. This includes mine operations and mobile equipment maintenance.

The mine operations group would also maintain haul roads and feed ore to the process plant. Emphasis would be placed on safety and training, with dedicated is trainers for the mining equipment.

The mining manager would be responsible for the department and would be assisted by the mine operation superintendent and the mine maintenance superintendent.

21.2.5 Exploration, Geology and Mine Planning Department

This department is responsible for mine planning, geotechnical and geology activities, including exploration drilling.

The technical services manager would be responsible for the department and would be assisted by the senior mining engineer, the senior geotechnical engineer, and the senior geologist.

21.2.6 Administration and Supply Management Department

This department includes all administration, accounting, warehouse and purchasing functions as well as catering, contract administration, and secretarial. The administration, stores and supply manager would report to the general manager.

21.2.7 HR and HSE Department

The HR and HSE manager would be assisted by an HR officer and HSE officer.

The HR officer would oversee all human resources related issues.

The HSE officer will be responsible for health, industrial hygiene, safety, security, emergency response and environment, and would be in close contact with the medical services, prevention team, guardhouse, process plant manager and the environment specialist. The HSE advisor would control all aspects of safety on site and industrial hygiene matters. The environmental officer would control all matters relating to the permitting, environment control and reporting requirements.

22 INTERPRETATION AND CONCLUSIONS

The Carolina Lithium Project is in a rural area of Gaston County in North Carolina, USA, approximately 44 km northwest of Charlotte, 16 km northeast of the town of Kings Mountain and 11 km southwest of the town of Lincolnton. The property parcels are easily accessible through a paved secondary road bisecting the project area. Several small gravel roads traversable by truck allow further access into the properties. Interstate highway I-85 lies 13 km to the South and provides easy access to the city of Charlotte and the Charlotte Douglas international airport 30 km to the East. Charlotte is North Carolina's largest city.

The Carolina Lithium project supports conventional and proven mining and spodumene concentration technology. The spodumene bearing ore will be extracted from open pits with in-pit crushing and conveying. Similarly, the open pit waste rock and the concentrator rejects will be co-disposed in dry state (after filtering of the concentrator rejects) with the usage of crushing and conveying equipment. This will minimize usage of trucking and fossil fuel consumption. The spodumene conversion to lithium hydroxide finish product is based on the technology developed and proposed by MO. PLL is committed to execute all phases of the project in a socially responsible and environmentally sound manner. The open pit, concentrator and converter plants have been designed and positioned to minimize the footprint. The processing plants will recover water for re-use in processing to minimize the use of surface/underground water and reduce treated water discharge.

Project investment will provide positive social, economic and material supply strategic impacts locally and

Project investment will provide positive social, economic and material supply strategic impacts locally and nationally, including job creations, training, procurement and business opportunity throughout the region, from construction through operations.

22.1 MINERAL RESOURCE

Sufficient data have been obtained through various exploration and sampling programs to support the geological interpretations of the lithium-bearing pegmatite deposit on the Property. The data are of sufficient quantity and reliability to reasonably support the resource estimates in this TRS.

The geology of the Project area and controls to mineralization are well-understood. Exploration techniques employed on the Project are appropriate and data derived from them are of sufficient quality to support the modelling of Mineral Resources in accordance with the JORC Code.

Based on an assessment of available QA/QC data, the entire lithium and whole-rock drill core assay dataset is acceptable for resource estimation with assaying posing minimal risk to the overall confidence level of the MRE.

On the Core Property, 76 spodumene-bearing pegmatite dike portions are modeled within three major corridors that extend over a strike length of up to 2 km and commonly have a set of thicker spodumene-bearing pegmatite dikes of 10 m to 20 m true thickness at their core. Major dikes strike northeast and dip moderately to the southeast and can be traced between drillhole intercepts and surface outcrops for over 1.7 km. Dikes are intersected by drilling to a depth of 300 m down dip. Although individual units may pinch out, the deposit is open at depth and along strike. The Mineral Resource model has a maximum vertical depth of 210 m from surface. On average, the deposit extends to 150 m below surface.

On the Central Property, 11 spodumene-bearing pegmatite dikes fall within a corridor that extends over a strike length of up to 350 m and contains a pair of thicker spodumene-bearing pegmatite dikes of 10 m to 20 m true thickness. These major dikes strike northeast and dip steeply to the southeast dipping. Dikes are intersected by



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drilling to a depth of 200 m down dip. Although individual units may pinch out, the deposit is open at depth and along strike. The Central Mineral Resource has a maximum vertical depth of 250 m from surface. On average, the model extends to 200 m below surface.

On the Huffstetler Property, six spodumene bearing pegmatites fall within a corridor that extends over a strike length of up to 0.4 km and form a stacked series of inclined sheets that range from 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 southeastern edge of the permit boundary. Although individual units may pinch out, the deposit is open at depth and along strike. The Huffstetler Mineral Resource has a maximum vertical depth of 150 m below the topography surface.

Spodumene, quartz, feldspar and muscovite mica and occur as essential rock-forming minerals of the modeled pegmatites and together comprise approximately 90% of the mineral assemblage. Sufficient data are available to generate reliable mineral grade estimates using the ordinary kriging method for the Piedmont properties.

Metallurgical test work on composite bulk samples of spodumene-bearing pegmatite from the property was conducted at bench scale at MRL in 2018, and at pilot-plant scale at SGS Lakefield in 2019. Flotation results showed that that lithium occurs almost exclusively within spodumene and that concentrates of greater than 6.0% Li₂O were achievable with an iron content to less than 1.0% Fe₂O₃. Quartz, feldspar, and mica concentrates were produced as by-products of the spodumene concentrate. Initial results demonstrate commercial potential for each by-product.

The depth, geometry, and grade of pegmatites on the properties make them amenable to exploitation by open cut mining methods. At the Core Property, reasonable prospects for economic extraction are specified for 97% of the resource model (36.68 Mt) that falls within a resource constraining conceptual pit shell. Reasonable prospects for economic extraction are specified for the entire Central resource model (5.16 Mt) and for the entire Huffstetler resource model (2.31 Mt).

For the Carolina Lithium Project, this study has defined (at a 0.4% Li₂O reporting cut-off) a global Inferred and Indicated MRE of 44.15 Mt at 1.08% Li₂O, containing 475,000 tonnes of lithium oxide with an effective date of October 20, 2021. Within the reported resource model, global by-product Mineral Resources are 12.99 Mt of quartz, 20.00 Mt of feldspar and 1.82 Mt of mica and have an effective date of October 20, 2021.

The global total incorporates: An Indicated Mineral Resource of 21.55 Mt at 1.121% Li₂O with 6.34 Mt of quartz, 9.69 Mt of feldspar and 0.90 Mt of mica; and An Inferred Mineral Resource of 17.61 Mt at 1.03% Li₂O with 5.16 Mt of quartz, 8.08 Mt of feldspar and 0.73 Mt of mica.

The completed Phase 5 drill program has partially tested previous Exploration Targets reported by the Company on 25 June 2019 and has successfully delineated new lithium and by-product Mineral Resources for the Project. Currently, the Company is conducting geological mapping, and exploration targeting study at the Project. No new exploration targets are presented for the Project.

22.2 MINING

The following summaries of interpretation and conclusion associated with the PLI project are primarily focused on the mine plan and mining-specific issues.

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- Inferred resources extracted in early years may be converted to indicated resources with infill drilling in the upper portions of the deposit;
- Acquisition of additional property tracts northeast of North Pit, southwest of South Pit, and east and south of East Pit could add additional mineral resources;
- Additional recoverable tonnes may be achieved via stream relocations allowing for combining of certain pits;
- Off-site construction projects with a balance of fill could be utilized to offset waste handling costs;
- Continued evaluation of ballast sales may be helpful in recouping waste rock costs;
- Property acquisitions are required to execute the mine plan as summarized in this TRS. Although capital costs scheduling has accounted for such acquisitions, risk exists with regards to cooperation from current property controllers;
- The final amount of potentially acid producing material which will be subject to mitigation requirements is unknown. Additional testing is ongoing to better estimate volumes of such material. Risk exists based on the amount of potentially acid producing material defined;
- Mine scheduling as summarized in this TRS is predicated upon reasonable expectations of permit approval. As with any mining venture, risk exists with regards to permit approvals. Approval of both the initial mine permit and required mine permit revisions hold potential risk to the Project;
- Pit slope wall angles along southwest walls (northeast-dipping) have a potential to require lower overall slope angles and possibly would reduce available resources. Geotechnical analysis has resulted in implementation of an offset to reduce the opportunity for adverse conditions;
- All parcel data within the project boundary was taken from county tax information. Surveys should be undertaken before final site maps are completed. Non-surveyed parcels may result in minor variations to the overall project acreage and permits;
- Some parcels included in the study are pending an option agreement. Parcels not controlled by PLI present substantial risk to the project layout, permitting, resource estimates, and cost modelling;
- Initial site development costs and equipment costs are based on late-2021 estimates. Estimates should be updated as the project progresses.

22.3 METALLURGY TESTING

In 2019, Piedmont engaged SGS Canada Inc. in Lakefield, Ontario to undertake testwork on variability and composite samples. Dense Medium Separation ("DMS") and locked-cycle flotation tests produced high-quality spodumene concentrate with a grade above 6.0% Li₂O, iron oxide below 1.0%, and low impurities from composite samples. The feed grade of the composite sample was 1.11% Li₂O.

In 2020, a pilot plant testwork program was undertaken at SGS Canada Inc. A 54-t bulk outcrop sample from the Carolina Lithium Project was processed through a DMS and flotation pilot plant. Using the optimized results from the flotation pilot plant, the combined DMS and flotation concentrates graded >6% Li₂O and <1% Fe₂O₃ with lithium recoveries > 70%. Optimized testing on the master composite sample resulted in lithium recovery of 82% and concentrate grading 6.13% Li₂O.

In 2021, Piedmont engaged SGS Canada Inc. in Lakefield, Ontario to undertake testwork on nine variability samples. Samples were produced from drill core from the East and South pits and represented the early years of production (i.e., the first 10 years of operation). The samples generally contained elevated levels of host rock dilution (ranging from 9.4% to 17.3%) as compared to the mine plan average (10%). DMS and batch and locked-cycle flotation tests

were undertaken. Based on the historical testwork and the 2021 variability program, the DFS assumes a spodumene recovery of 77.0% when targeting a 6.0% Li₂O spodumene concentrate product.

22.3.1 Conversion Metallurgy

In 2021, Piedmont engaged Metso Outotec to undertake pilot plant testwork using their proprietary Lithium Hydroxide Process. The spodumene concentrate sample used was produced during concentrator pilot plant operation in 2020. The spodumene concentrate was calcined by Metso Outotec at their laboratory in Oberursel, Germany. The calcined concentrate was then sent to Metso Outotec Research Center in Pori, Finland for hydrometallurgical testing.

The pilot plant flowsheet tested included: soda leaching, cold conversion, secondary conversion, ion exchange, and lithium hydroxide crystallization. The pilot plant operated for approximately 10 days. Roughly 100 kg of calcined spodumene concentrate was fed to the pilot plant. The average total lithium extraction achieved in soda leaching and cold conversion was 89% during the first 136 h of operation. Process recycles were incorporated in the pilot plant with no significant accumulation of impurities in the process. First stage lithium hydroxide crystallization was operated continuously during the pilot plant. Second stage crystallization was operated in batches after the completion of the continuous pilot plant. Impurities levels in the final battery-quality lithium hydroxide monohydrate product were typically low with Al <10 ppm, Ca <10 ppm, Fe <20 ppm, K <10 ppm, and Si <40 ppm. All other metal impurities were below detection limits.

22.4 RECOVERY METHODS

- The recovery of lithium from ore to final product has been achieved through a concentration stage, with the concentrate then being converted to a saleable lithium hydroxide monohydrate product.
- The DMS and Flotation technologies for the recovery of spodumene is a widely used technology for beneficiation of spodumene so both are considered a very low risk technology.
- Testwork confirming the technologies applicability was undertaken across samples considered representative of the ore zones.
- A concentrate grade that is in line with expectations of 6 % Lithia, with a nominal 1.0 % contained haematite grade was achieved, making the product very saleable.
- The averaged spodumene recovery from the DMS test program was nominally 34.2%, with a further 42.8% from the flotation circuit.
- The conversion of the contained lithium in the concentrate to a final lithium hydroxide monohydrate was tested using the Metso:Outotec (MO) patented carbonate process, and not the sulfation process which is a known commercialized process. This does make the technology a process risk given there are no known existing commercial operations.
- The results from the pilot program have confirmed that lithium conversion can be achieved, with >87% recovery, with a proposed recovery of 91% being applied (from technology provider). Provided correct solution management occurs then the process production targets can be achieved.

- Production schedule for the project is based on processing 2.1M tons per annum of ROM ore to produce a nominal 215k ton per annum of concentrate (6 % Li₂O) which is processed to produce 33k ton per annum of lithium hydroxide monohydrate.
- Tailings residue from the convertor is returned to the "waste" ore dry stack via overland conveyor, a nominal 382k ton of wet residue (20% (w/w)).
- An effluent stream to bleed a chloride rich solution of nominally 56gpm is to be disposed to a municipal treatment facility.

22.5 RISK & OPPORTUNITY EVALUATION

A risk assessment (including the gathering of the risks highlighted by the other consultants responsible for their specific disciplines) was conducted by Primero. An internal workshop session including the key Primero managers and engineers was held on September 16th, 2021. Another session including the PLL staff was held on October 06, 2021 to complete the risk and opportunity register.

Risks and opportunities were listed into the following six categories:

- Technical risks and opportunities:

- Technical risks and opportunities;
- Operation risks and opportunities;
- Mineral Resources risks and opportunities;
- Mining risks and opportunities;
- Environmental & permitting risks and opportunities;
- Project risks and opportunities.

Each of the risk and opportunity items of the lists were ranked with the use of a standard two-axis matrix. The first evaluation criteria is the Frequency (Five levels defined as Certain (A) to Rare (E)) whereas the second criteria is the Consequence (Five levels defined as Insignificant (1) to Catastrophic (5)). The combination of the Frequency and Consequences criterions results the Risk or Opportunity ranking of 4 categories (Low; Medium; High and Extreme).

They were a grand total of 129 risks identified for which 14 were ranked at a high level; 41 were ranked at a Medium level and 74 were Ranked at a Low level. Table 22-1 to Table 22-6 presents the summary of the number of risks and ranking and per project areas.

Table 22-1 - Technical Risks – Number of risk items and ranking proportions

Technical Risks	Extreme Rated Items		High Rated Items		Medium Rated Items		Low Rated Items	
	Number	%	Number	%	Number	%	Number	%
89	0	0	2	2	34	38	53	60

Table 22-2 - Project Risks – Number of risk items and ranking proportions

Project Risks	Extreme Rated Items		High Rated Items		Medium Rated Items		Low Rated Items	
	Number	%	Number	%	Number	%	Number	%
14	0	0	0	0	4	29	10	71

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Table 22-3 - Operation Risks – Number of risk items and ranking proportions

OPERATION RISKS	EXTREME RATED ITEMS		HIGH RATED ITEMS		MEDIUM RATED ITEMS		LOW RATED ITEMS	
	Number	%	Number	%	Number	%	Number	%
3	0	0	2	67	1	33	0	0

Table 22-4 - Geology Risks – Number of risk items and ranking proportions

Geology Risks	Extreme Rated Items		High Rated Items		Medium Rated Items		Low Rated Items	
	Number	%	Number	%	Number	%	Number	%
5	0	0	1	20	1	20	3	60

Table 22-5 - Geology Risks – Number of risk items and ranking proportions

Mining Risks	Extreme Rated Items		High Rated Items		Medium Rated Items		Low Rated Items	
	Number	%	Number	%	Number	%	Number	%
8	0	0	2	25	0	0	6	75

Table 22-6 - Environmental Risks – Number of risk items and ranking proportions

Environmental Risks	Extreme Rated Items		High Rated Items		Medium Rated Items		Low Rated Items	
	Number	%	Number	%	Number	%	Number	%
10	0	0	7	70	1	10	2	20

All project element having a ranked Higher risk have been reviewed with more attention. They were all addressed with specific safeguards and recommendations that are highlighted in Table 22-7. PLL is integrating into action plans and project.

Table 22-7 – Summary of safeguards and recommendations for the risk elements ranked High

Area	Category	Risk & Opportunity Event
2400 / LiOH Plant	Engineering	Uncommercialized technology
2400 / LiOH Plant	Financial	LiOH lower than expected sales price
GEN / Project	Health, Safety & Community	Non-compliance with actual dust model - Gaston County approved level - construction
GEN / Operations	Health, Safety & Community	Non-compliance with the actual noise plan approved by Gaston County
GEN / Operations	Plant Operations	Quantity and quality of labour, employees, availability for the operations.

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Area	Category	Risk & Opportunity Event
GEN / Geology	Engineering	Mining and processing are complicated by resource dikes that are thinner, less continuous or more complicated than modeled and/or projected to be mined and processed as related to quantity, grade & dilution.
GEN / Environment	Permitting and environmental	Permit not delivered or delayed: Mining Permit & Associated Required Revisions / North Carolina Mining Act of 1971 & Associated ACOE 404 Permits.
GEN / Environment	Permitting and environmental	Delayed permit delivery: I3 Rezoning
GEN / Environment	Permitting and environmental	Permit not delivered: I3 Rezoning
GEN / Environment	Permitting and environmental	Delayed permit delivery: Special Use Permit Permit
GEN / Environment	Permitting and environmental	Permit not delivered: County Special Use Permit Permit
GEN / Environment	Permitting and environmental	Delayed permit delivery: Road Abandonment
GEN / Environment	Permitting and environmental	Permit not delivered: Road Abandonment
Area	Category	Risk & Opportunity Event

23 RECOMMENDATIONS

Specific recommendations for the Carolina Lithium project are summarized below for the project areas.

23.1 MINERAL RESOURCE

PLL is continuing to work both internally and with outside assistance to continue to further define their Resource Base and to Optimize the proposed LOM Plan.

MGG recommends the following actions are completed to support the ongoing Mineral Resource development effort at the Carolina Lithium Project:

- Investigate shallow portions of Core Property deposits deemed amenable to early-stage mining through infill drilling and appropriate surface methods, at 20 m to 40m spacings. An understanding of the short-range variability of mineralization, pegmatite dike orientations, and weathering should be developed, and Measured resource classification criteria established.
- Model the extent of major metavolcanic and metasedimentary host rock units to support mine planning at the Core property. Models will improve bulk density estimation and support environmental and geotechnical characterization of waste rock.
- Conduct infill drilling to increase data density and support the upgrading of Mineral Resources from Inferred to Indicated throughout the Project.
- Undertake a targeting study to identify new exploration targets and prioritize step-out drill targets that expand defined resource pegmatites.
- To support exploration targeting across its properties, and to direct future property acquisitions, Piedmont should continue to synthesize a mineral system model for spodumene bearing pegmatites along the TSB.

23.2 MINING

- Additional property for waste storage must be acquired and added to the mine permit with the capacity to hold approximately 79 million tonnes.
- Some adjoining properties will need to be purchased to remove regulated offsets to obtain the tonnages shown in this feasibility study. It is believed that this is achievable before operations starts and costs have been included in the Mining Cost Model of this study.
- Continue to develop markets and cost analyses for ballast production from waste material.
- Further examine the long-range possibilities of using waste material for off-site projects.
- Evaluate permitting requirements and costs associated with mining through the northwest stream to combine Central Pit and North Pit.
- Research acquisition possibilities along the northeast, east, and southwest project boundaries for additional resource development, as well as added waste disposal areas.
- Complete a drilling program to convert inferred and indicated classification of the current resource to measured, especially in shallower areas of the deposit. This additional exploration will help add measured and indicated resource in the early years of mine production.
- Develop Central and Huffstetler Properties to an expanded level project site. Initial indications are that the Central Property may contain higher grade Li₂O possibilities, as compared to Core Property.
- Finalize the mine permit and the rezoning permit for Core Property site.

- Refine cost estimates of contract mining services.
- Update project estimates and costs as drilling progresses and property acquisitions develop.

23.3 METALLURGY TESTING / RECOVERY METHODS

It is recommended to complete on-going testwork programs which will be completed during 2022:

- By-products filtration testing.
- Flotation process water treatment testing.
- Ore sorting testwork.

It is also recommended to further explore:

- Alternate mica, spodumene, and feldspar flotation reagents (chemistries and suppliers).
- Potential for by-products production from DMS tailings.
- Optical measurements on mica concentrates.
- Calcination and leaching testwork on variability program concentrate samples.

PLL is continuing to work both internally and externally to continue to further define their selected process technologies.

- Flotation testwork to eliminate kerosene, hydrofluoric acid.
- Further evaluate the concentrate quality (ie contained hematite) on conversion plant recoveries.

23.4 PROJECT INFRASTRUCTURE / LAYOUT

During the DFS reporting it was identified that improvements to the layout of the project site could improve operational challenges, economics and minimize social impacts. The recommendations are:

- Evaluate the relocation of the concentrator closer to the conversion facility.
- Given the concentrate and analcime are being conveyed via overland conveyor to minimize truck movement, then changes to the layout are considered necessary, predominantly at the concentrator.
- Further evaluation of overland technologies and transfer methods should be undertaken.
- Implementing an ore sorting circuit to reduce production quality risks, is recommended and would also lead to a layout re-evaluation.

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Piedmont Lithium, 2019a, "Piedmont Increases Lithium Resource by 47% to 27.9 Million Tonnes", June 25, 2019, available: [HTTPS://IR.PIEDMONTLITHIUM.COM/ASX-ANNOUNCEMENTS](https://ir.piedmontlithium.com/asx-announcements).

Piedmont Lithium, 2019b, "Outstanding PFS-Level Metallurgical Results", July 17, 2019, available: [HTTPS://IR.PIEDMONTLITHIUM.COM/ASX-ANNOUNCEMENTS](https://ir.piedmontlithium.com/asx-announcements).

Piedmont Lithium, 2019c, "Significant Increase in By-Product Mineral Resources", August 1, 2019, available: [HTTPS://IR.PIEDMONTLITHIUM.COM/ASX-ANNOUNCEMENTS](https://ir.piedmontlithium.com/asx-announcements).

Piedmont Lithium, 2019d, "Updated Scoping Study Extends Project Life and Enhances Exceptional Economics", August 7, 2019, available: [HTTPS://IR.PIEDMONTLITHIUM.COM/ASX-ANNOUNCEMENTS](https://ir.piedmontlithium.com/asx-announcements).

24.2 MINING AND GEOTECHNICAL

MM&A Technical Report. Summary of Waste Rock and Process Tailings Geochemical Assessment, Piedmont Lithium Project – August 2019.

MM&A Addendum Technical Report: Results of Humidity Cell Leaching Tests, Piedmont Lithium Project – December 2019.

MM&A Memorandum, Acid Base Account (ABA) and Toxicity Characteristic Leaching Procedure (TCLP) Test Results Summary and Proposed Mitigation Plan Associated with Potentially Acid Producing Waste Rock in the Southern Portion of East Pit – August 27, 2021.

24.3 METALLURGICAL TESTWORK

Primero. Scoping Study Update Report – Ref 18605-REP-GE-001– Carolina Lithium Project– September 10, 2021.

25 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

The Qualified Persons responsible for the development of this TRS have relied upon information provide by PLL, including:

1. **Macroeconomic Trends, Data & Assumptions**, including owners costs, selected discount factor, royalties (Sections 18, 19)
2. **Marketing Information**, including sales forecasts for lithium hydroxide as reflected in financial modeling; baseline projected spodumene values for block value and cutoff grade derivations; (Sections 11, 12,16,19)
3. **Legal Matters**, including mineral and surface-based land and tenure, property history (Section 2)
4. **Environmental Matters**, including permitting requirements and schedules (Section 17)

Consent of Qualified Person

In accordance with the requirements of Regulation S-K 1300 Modernization of Property Disclosures §229.1302(b)(4)(iv)

Report Description

Report titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina"
("Report")

Piedmont Lithium Inc.
("Company")

Carolina Lithium Project
("Deposit")

February 27, 2023
("Date of Report")

Statement

I, **Leon McGarry, P. Geo.**, of McGarry Geoconsulting Corp. confirm that:

- In connection with any Securities Act filings or Exchange Act report and any amendment, supplement, or exhibit thereto, McGarry Geoconsulting Corp. consents to:
 - The filing and use of the Technical Report Summary titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina" ("TRS – Definitive Feasibility Study") in connection with the Company's 10-K filing with an approximate filing date of February 28, 2023; and,
 - The use of the McGarry Geoconsulting name, including our status as an expert or Qualified Person (as defined in Subpart 1300 of Regulation S-K promulgated by the Securities and Exchange Commission) in connection with the TRS – Definitive Feasibility Study; and,
 - The information derived, summarized, quoted or reference from the TRS – Definitive Feasibility Study, or portions thereof, that were prepared by us, that we supervised the preparation of and/or that was reviewed or approved by us, that is reported or incorporated by reference into a Security Act filing.
- I have read and understood the requirements of the Regulation S-K 1300 Modernization of Property Disclosures.
- I am a Qualified Person as defined by Regulation S-K, and to the activity for which I am accepting responsibility.
- I have reviewed the Technical Report Summary to which this Consent Statement applies.
- I am a full time employee of **McGarry Geoconsulting Corp.** and have been engaged by **Piedmont Lithium Inc.** to prepare the documentation for the **Carolina Lithium Project** on which the Report is based, for the period ended on **27 February 2023**.
- While the period ends on February 27, 2023, the Report maintains an effective date of December 31, 2021.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation as of the effective date of the report, December 31, 2021 relating to:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 3 – Property Description
- Section 4 – Accessibility, Climate, Local Resources, Infrastructure, Physiography
- Section 5 – History

-
- Section 6 – Geological Setting, Mineralization, and Deposit
 - Section 9 – Data Verification
 - Section 10 – Mineral Processing and Metallurgical Testing
 - Section 11 – Mineral Resource Estimates
 - Section 22 – Interpretation and Conclusions
 - Section 23 – Recommendations
 - Section 24 – References
 - Section 25 – Reliance on Information Provided by the Registrant
-

CONSENT

I consent to the filing of the Technical Report Summary by **Piedmont Lithium Inc.** ("Reporting Company")

Additional Reports related to the Deposits for which the Qualified Person signing this form is accepting responsibility:

- The Reporting Company's Annual Reports (10-K) for the next 12 months;
- The Reporting Company's Quarterly Reports for the next 12 months;
- The Reporting Company's Investor Presentations for the next 12 months;
- The Reporting Company's future press releases for the next 12 months, until such time that the Report is superseded or this consent is otherwise withdrawn;
- The Reporting Company's exhibition booths at any conferences for the next 12 months; and
- Any other releases, presentations and promotional material made by the Reporting Company during the next 12 months, until such time that the exploration target included in the Report is superseded or this consent is otherwise withdrawn.



Signature of Competent Person

FEBRUARY 27, 2023

Date

PROFESSIONAL GEOSCIENTISTS ONTARIO

Professional Membership

2348

Membership Number



Signature of Witness

AMY DAVIES

Print Witness Name

Consent of Qualified Person

In accordance with the requirements of Regulation S-K 1300 Modernization of Property Disclosures §229.1302(b)(4)(iv)

Report Description

Report titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina"
("Report")

Piedmont Lithium Inc.
("Company")

Carolina Lithium Project
("Deposit")

February 27, 2023
("Date of Report")

Statement

I, **Peter Grigsby, CP.Eng.**, an authorized representative of Primero Group Americas Inc, confirm that:

- In connection with any Securities Act filings or Exchange Act report and any amendment, supplement, or exhibit thereto, I consent to:
 - The filing and use of the Technical Report Summary titled "Amended Technical Report Summary of a Definitive

Feasibility Study of the Carolina Lithium Project in North Carolina" ("TRS – Definitive Feasibility Study") in connection with the Company's 10-K filing with an approximate filing date of February 28, 2023; and,

○ The use of the Primero Group Americas Inc. name, including our status as an expert or Qualified Person (as defined in Subpart 1300 of Regulation S-K promulgated by the Securities and Exchange Commission) in connection with the TRS – Definitive Feasibility Study; and,

○ The information derived, summarized, quoted or reference from the TRS – Definitive Feasibility Study, or portions thereof, that were prepared by us, that we supervised the preparation of and/or that was reviewed or approved by me, that is reported or incorporated by reference into a Security Act filing.

- I have read and understood the requirements of the Regulation S-K 1300 Modernization of Property Disclosures.
- Primero Group Americas Inc. meets the definition of a "Qualified Person" as defined by Regulation S-K, and to the activity for which our firm is accepting responsibility.
- I have reviewed the Technical Report Summary to which this Consent Statement applies.
- I am an authorized representative and full time employee of **Primero Group Americas Inc.** and have been engaged by **Piedmont Lithium Inc.** to prepare the documentation for the **Carolina Lithium Project** on which the Report is based, for the period ended on **27 February 2023**.
- While the period ends on February 27, 2023, the Report maintains an effective date of December 31, 2021.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation as of the effective date of the report, December 31, 2021 relating to:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 10 – Mineral Processing and Metallurgical Testing
- Section 14 – Processing and Recovery Methods
- Section 18 – Capital Costs

-
- Section 19 – Economic Model and Sensitivity Analysis
 - Section 22 – Interpretation and Conclusions
 - Section 23 – Recommendations
 - Section 24 – References
 - Section 25 – Reliance on Information Provided by the Registrant

CONSENT

I consent to the filing of the Technical Report Summary by **Piedmont Lithium Inc.** ("Reporting Company")

Additional Reports related to the Deposits for which the Qualified Person signing this form is accepting responsibility:

- The Reporting Company's Annual Reports (10-K) for the next 12 months;
- The Reporting Company's Quarterly Reports for the next 12 months;
- The Reporting Company's Investor Presentations for the next 12 months;
- The Reporting Company's future press releases for the next 12 months, until such time that the Report is superseded or this consent is otherwise withdrawn;
- The Reporting Company's exhibition booths at any conferences for the next 12 months; and
- Any other releases, presentations and promotional material made by the Reporting Company during the next 12 months, until such time that the exploration target included in the Report is superseded or this consent is otherwise withdrawn.



02/27/2023

Signature of Authorized Representative of the 3rd Party
Firm Acting as Qualified Person

Date



Ahren Gray

Signature of Witness

Print Witness Name

Consent of Qualified Person

In accordance with the requirements of Regulation S-K 1300 Modernization of Property Disclosures §229.1302(b)(4)(iv)

Report Description

Report titled "Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina"

("Report")

Piedmont Lithium Inc.

("Company")

Carolina Lithium Project

("Deposit")

February 27, 2023

("Date of Report")

Statement

I, **Dr. Steven Keim, PE**, an authorized representative of Marshall Miller & Associates, Inc., confirm that:

- In connection with any Securities Act filings or Exchange Act report and any amendment, supplement, or exhibit thereto, I consent to:
 - The filing and use of the Technical Report Summary titled "*Amended Technical Report Summary of a Definitive Feasibility Study of the Carolina Lithium Project in North Carolina*" ("TRS – Definitive Feasibility Study") in connection with the Company's 10-K filing with an approximate filing date of February 28, 2023; and,
 - The use of the Marshall Miller & Associates, Inc. name, including our status as an expert or Qualified Person (as defined in Subpart 1300 of Regulation S-K promulgated by the Securities and Exchange Commission) in connection with the TRS – Definitive Feasibility Study; and,
 - The information derived, summarized, quoted or reference from the TRS – Definitive Feasibility Study, or portions thereof, that were prepared by us, that we supervised the preparation of and/or that was reviewed or approved by us, that is reported or incorporated by reference into a Security Act filing.
- I have read and understood the requirements of the Regulation S-K 1300 Modernization of Property Disclosures.
- Marshall Miller & Associates, Inc. meets the definition of a "Qualified Person" as defined by Regulation S-K, and to the activity for which our firm is accepting responsibility.
- I have reviewed the Technical Report Summary to which this Consent Statement applies.
- I am an authorized representative and full-time employee of **Marshall Miller & Associates, Inc.** who has been engaged by **Piedmont Lithium Inc.** to prepare the documentation for the **Carolina Lithium Project** on which the Report is based, for the period ended on **27 February 2023**.
- While the period ends on February 27, 2023, the Report maintains an effective date of December 31, 2021.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in our supporting documentation as of the effective date of the report, December 31, 2021, relating to:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 3 – Property Description
- Section 4 – Accessibility, Climate, Local Resources, Infrastructure, Physiography
- Section 5 – History
- Section 6 – Geological Setting, Mineralization, and Deposit
- Section 12 – Ore Reserve Estimates
- Section 13 – Mining Methods
- Section 15 – Infrastructure
- Section 17 – Environmental Studies and Permitting
- Section 18 – Capital and Operating Costs
- Section 20 – Adjacent Properties
- Section 22 – Interpretation and Conclusions
- Section 23 – Recommendations
- Section 24 – References
- Section 25 – Reliance on Information Provided by the Registrant

CONSENT

I consent to the filing of the Technical Report Summary by **Piedmont Lithium Inc.** ("Reporting Company")

Additional Reports related to the Deposits for which the Qualified Person signing this form is accepting responsibility:

- The Reporting Company's Annual Reports (10-K) for the next 12 months;
- The Reporting Company's Quarterly Reports for the next 12 months;
- The Reporting Company's Investor Presentations for the next 12 months;
- The Reporting Company's future press releases for the next 12 months, until such time that the Report is superseded or this consent is otherwise withdrawn;
- The Reporting Company's exhibition booths at any conferences for the next 12 months; and
- Any other releases, presentations and promotional material made by the Reporting Company during the next 12 months, until such time that the exploration target included in the Report is superseded or this consent is otherwise withdrawn.



Signature of Authorized Representative of the 3rd Party
Firm Acting as Qualified Person

February 27, 2023

Date

Kevin M. Andrews

Signature of Witness

Kevin M. Andrews

Print Witness Name

TECHNICAL REPORT SUMMARY
CAROLINA LITHIUM PROJECT

PARCEL CONTROL SCHEDULE

Gaston County PID Parcel No.	Piedmont Owned	Long Term Lease	Lease to Purchase	Option to Purchase	Option to Lease	Option to Purchase or Lease	Book Value (\$)
163763	58.5						\$ 1,157,830
219649	103.5						Combined with 163763
220035	25.5						Combined with 163763
159150	25.88						\$ 534,718
159152	50.5						Combined with 159150
160647			69.7				\$ 658,769
213460	113.49						\$ 3,203,882
213461	1.33						Combined with 213460
198472	8.54						Combined with 205287
198928	3.03						Combined with 205287
205287	20.14						\$ 1,138,478
215730	2.87						Combined with 205287
215731	20						Combined with 205287
218191	120.68						\$ 3,141,086
218192	24.67						Combined with 218191
163748				29.71			\$ 29,123
163749				1.1			Combined with 163748
163750				7.13			Combined with 163748
163752				0.89			Combined with 163748
160648				43.24			\$ 58,080
208269				24.2			Combined with 160648
208270				10			Combined with 160648
159637					6.09		\$ 44,956
159638					18.88		Combined with 159637
216007	53.18						\$ 1,282,977
159640				9.75			\$ 36,288
159641				4.89			Combined with 159640
159642				5.53			Combined with 159640
159240		113.02					\$ 164,723
224610						53.4	\$ 53,400
220168				1.84			\$ 13,883
220169				16.67			Combined with 220168
161210						77.8	\$ 83,970
161247						2.13	Combined with 161210
161250						4.04	Combined with 161210
160676						11.93	\$ 13,350
160684						1.42	Combined with 160676
224842	41.49						\$ 175,606
211000	9.66						\$ 58,519
160753	51.87						\$ 1,118,296
218752	3.2						Combined with 160753
216006	2.82						\$ 273,321
223136	7.89						\$ 156,570
159639	1.2						\$ 318,643
159631	10.2						\$ 81,466
159182				5.35			\$ 46,750
159181				1.28			\$ 35,000
159179				1.46			Combined with 159181

Gaston County PID Parcel No.	Piedmont Owned	Long Term Lease	Lease to Purchase	Option to Purchase	Option to Lease	Option to Purchase or Lease	Book Value (\$)
159167	0.95						\$ 159,241
198919				0.81			\$ 163,792
226287				1.03			\$ 22,500
159199	0.95						\$ 128,617
215387	30.41						\$ 189,513
157922	31.07						\$ 835,955
159196	20.74						\$ 637,067
159160	1.2						\$ 140,123
159164	1.1						\$ 179,786
159165	1						Combined with 159164
159166	1.1						\$ 146,270
214055	1.9						\$ 385,874
209087	3.2						\$ 438,913
159191	1.98						\$ 542,197
159190	1.21						Combined with 159191
227996	87.81						Combined with 160753
159644	2.12						\$ 202,207
225770				21.84			\$ -
162331				32.75			\$ 22,284
162299				15.86			Combined with 162331
162342				0.91			Combined with 162331
159203				2.53			\$ 42,500
208719				0.93			Combined with 208719
208720				1.69			\$ 25,000
159194				0.95			\$ 11,600
159195	11.67						\$ 365,638
159154	1.15						\$ 265,550
198920	1.05						\$ 234,051
159155	1						\$ 116,944
159159	1.2						\$ 175,728
159171			9.66				\$ 456,762
160720	0.69						\$ 30,195
160744	0.69						Combined with 160720
157923	1.82						\$ 386,152
226286	0.99						\$ 430,606
159186	1.69						\$ 170,394
159187	1.2						Combined with 159186
163155				41.14			Combined with 221303
221303				117.5			\$ 83,281
159162				2.32			\$ 25,000
159188				1.52			\$ 40,000
223454				4.42			\$ 34,125
211499				18.46			\$ 63,578
211500				25.63			Combined with 211499
212610				1			Combined with 211499
212608				1			Combined with 211499
212607				6.28			Combined with 211499
212606				2.23			Combined with 211499

Gaston County PID Parcel No.	Piedmont Owned	Long Term Lease	Lease to Purchase	Option to Purchase	Option to Lease	Option to Purchase or Lease	Book Value (\$)
212617				1.44			Combined with 211499
212616				1			Combined with 211499
212615				0.99			Combined with 211499
212611				2.45			Combined with 211499
159168	12.03						\$ 1,048,597
157826	28.62						\$ 825,991
157874	0.91						\$ 239,123
157943	12.69						Combined with 157826
157946	1.92						Combined with 157826
157999	0.5						Combined with 157826
151570						0	\$ -
218767						0	\$ -
159173				3.35			\$ 31,500
159176	1.37						\$ 207,513
160689	0.96						\$ 159,454
160757				22.2			\$ 16,320
224400				29.3			\$ 19,778
212609	0.99						\$ 15,127
157902	1.71						\$ 15,176
160760	1.96						\$ 371,683

159207	10.49					\$	530,934
228043				4.47		\$	2,012
160762	0.57					\$	109,678
157949	0.58					\$	119,730
158000	0.9						Combined with 158000
157714				21.94		\$	9,873
159156	1.22					\$	212,595
160790				0.54		\$	10,202
160791				1.56			Combined with 160790
160793				20.57			Combined with 160790
219955				15.36		\$	6,912
219956				0.93		\$	419
162247				6.04		\$	2,718
160759				3.1		\$	35,993
212612				0.98		\$	10,300
157792				18.72		\$	8,505
161430	0.74					\$	20,766
208203	0.1						Combined with 161430
208204	0.03						Combined with 161430
159178	3.35					\$	265,528
162374				39.7		\$	17,865
204183				10.05		\$	15,750
204184	7.01					\$	608,146
159209	5.97					\$	424,571
159157	1.63					\$	318,442
160761	1.57					\$	265,965
157925	1.84					\$	446,982
161226	1.55					\$	60,431

Gaston County PID Parcel No.	Piedmont Owned	Long Term Lease	Lease to Purchase	Option to Purchase	Option to Lease	Option to Purchase or Lease	Book Value (\$)
161227	1.45						Combined with 161226
161228	1.51						Combined with 161226
226475	3.06					\$	16,086
226474	8.18					\$	1,577,492
161443				1.65		\$	120,554
157876	1.37					\$	79,951
215159	1.43						Combined with 157876
160703	0.92					\$	155,801
159214	17					\$	89,107
304329	59.7					\$	370,063
160728	1.26					\$	50,311
160738	0.81						Combined with 160728
160739	0.69						Combined with 160728
160745	0.66						Combined with 160728
160746	0.82						Combined with 160728
160717	0.69					\$	24,681
160719	0.86						Combined with 160717
159139	1.28					\$	651,638
159140	1.28						Combined with 159139
159141	0.92						Combined with 159139
159142	0.94						Combined with 159139
159124				44.91		\$	16,841
158034				38.84		\$	120,000
304327	40.74					\$	318,496
227995				0.68		\$	12,500
159211	54.36					\$	1,609,751
159622	94.49						Combined with 159211
159668				2.1		\$	17,500
212364				0.73		\$	37,500
212365				2			Combined with 212364
159671				1.24		\$	15,000
159684				0.89		\$	15,000
159148	25.25					\$	107,374
217859				8.26		\$	20,000
217863				3.06			Combined with 217859
224401	39.48					\$	518,321
224399				24		\$	15,600
160655				2.63		\$	1,978
160656				3.02			Combined with 160655
159118				71		\$	50,000
160657				41.31		\$	14,833
160659				1.07			Combined with 160657
159177	10.99					\$	424,882
158072				15.4		\$	87,500
158038				13.2			Combined with 158072
158037				3.84		\$	12,500
159675	79.35					\$	2,758,151
160640	34.15						Combined with 159675

Gaston County PID Parcel No.	Piedmont Owned	Long Term Lease	Lease to Purchase	Option to Purchase	Option to Lease	Option to Purchase or Lease	Book Value (\$)
160641	33.52						Combined with 159675
160643	36.69						Combined with 159675
159151	79.62						\$ 1,195,590
158061				5.33			\$ 16,500
213454				11.04			\$ 25,000
213455				10.94			Combined with 213454
216038				0.8			\$ 250
159594				0.8			Combined with 216038
216652				9.95			Combined with 216038
159601				0.89			Combined with 216038
209917				0.92			Combined with 216038
216654				10.01			Combined with 216038
159137				3.85			\$ 11,250
160721	0.69						\$ 139,718
300896				39.59			\$ 25,000
160727	2.08						\$ 185,753
161417				3.33			\$ 15,000
157947				0.91			\$ 31,250
209200				3.33			\$ 13,750
303909				0.87			Combined with 209200
157986				1.04			\$ 20,150
160741	0.69						\$ 68,368
160742	0.69						Combined with 160741
160747	0.89						Combined with 160741
160748	0.86						Combined with 160741
160749	0.7						Combined with 160741
157961				1			\$ 8,250
218217				6.73			\$ 25,000
217654				0.54			Combined with 218217
160651				1.81			Combined with 160654
160654				0.37			\$ 34,000
159632				0.77			\$ 20,000
159633				1.89			\$ 27,500
159621				21.74			\$ 150,000
157855	1.42						\$ 186,273
160735				2.24			\$ 12,500
159143				4.3			\$ 48,000
159646				14.39			Combined with 159143
159683				0.66			Combined with 159143
226549				0.64			Combined with 159143
159599				2.29			\$ 20,000
159592				1.97			\$ 20,000
198234				0.52			\$ 7,500
160800				1.93			\$ 32,500
160802				1.69			Combined with 160800
158033				0.62			\$ 25,000
198233				0.69			Combined with 158033
159682				2.28			\$ 15,000

Gaston County PID Parcel No.	Piedmont Owned	Long Term Lease	Lease to Purchase	Option to Purchase	Option to Lease	Option to Purchase or Lease	Book Value (\$)
159598				12.46			\$ 40,000
157789				12.07			\$ 25,075
157791				7.1			Combined with 157789
160698				1.22			\$ 21,250
159634				1.91			\$ 42,500
Total	1712.73	113.02	79.36	1155.79	24.97	150.72	\$ 39,303,043



**ATLANTIC LITHIUM LIMITED
AND CONTROLLED ENTITIES**
ACN: 127 215 132

ANNUAL REPORT 2022

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Tel: +61 7 3237 5999
Fax: +61 7 3221 9227
www.bdo.com.au

Level 10, 12 Creek Street
Brisbane QLD 4000
GPO Box 457 Brisbane QLD 4001
Australia

Independent Auditor's Report

Board of Directors
Atlantic Lithium Limited
Sydney, New South Wales

Opinion

We have audited the consolidated financial statements of Atlantic Lithium Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as of June 30, 2022 and 2021, and the related consolidated statements of profit or loss and other comprehensive income, changes in equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Group as of June 30, 2022 and 2021, and the results of its operations and its cash flows for the years then ended in accordance with International Financial Reporting Standards issued by the International Accounting Standards Board.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Group and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Going concern uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Group will continue as a going concern. As described in Note 1 to the consolidated financial statements, the Group has suffered recurring losses from operations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Group's ability to continue as a going concern within one year after the date that the consolidated financial statements are issued or available to be issued.



Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

BDO Audit Pty Ltd

/s/ Richard Swaby

Richard Swaby

Brisbane, Queensland, 23 February 2023

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
For the year ended 30 June 2022

	Notes	2022 \$	2021 \$
Interest and other income	2	-	56,056
Administration and consulting expenses		(3,108,580)	(2,195,501)
Depreciation	3	(16,827)	(12,024)
Employee benefits expenses		(1,341,739)	(648,579)
Exploration costs written off		(25,934)	(1,000,280)
Legal expenses		(1,039,711)	(197,096)
Interest expense		(1,644)	(23,872)
Unrealised foreign exchange gains (losses)	3	(927,941)	443,145
Share based payments	16	(12,020,442)	(1,000,090)
Write down on Demerger	20	(16,228,010)	-
Loss before income tax	3	(34,710,828)	(4,578,241)
Income tax expense	4	63,282	(319,300)
Loss for the year		(34,647,546)	(4,897,541)
Other comprehensive income			
<i>Items that may be reclassified to profit or loss</i>			
Exchange differences on translation of foreign operations		(5,774,884)	(1,359,173)
<i>Items that will not be reclassified to profit or loss</i>			
Change in fair value of financial assets	11	298,520	431,164
Income tax relating to change in fair value of financial assets	4	(90,750)	(129,349)
Total comprehensive loss for the year attributable to the owners of Atlantic Lithium Limited		(40,214,660)	(5,954,899)

Loss per share		Cents / share	Cents / share
Basic loss per share	8	(6.1)	(1.1)
Diluted loss per share	8	(6.1)	(1.1)

The above consolidated statement of profit or loss and other comprehensive income should be read in conjunction with the accompanying notes.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
As at 30 June 2022

	Notes	2022 \$	2021 \$
Current assets			
Cash and cash equivalents	9	23,881,650	19,135,463
Trade and other receivables	10	2,304,858	70,081
Other current assets		453,250	265,028
Total current assets		26,639,758	19,470,572
Non-current assets			
Other financial assets	11	1,232,520	936,500
Property, plant and equipment	12	209,137	335,254
Exploration and evaluation assets	13	11,050,354	51,449,462
Total non-current assets		12,492,011	52,721,216
Total assets		39,131,769	72,191,788

Current liabilities			
Trade and other payables	14	4,310,095	3,953,793
Total current liabilities		4,310,095	3,953,793
Non Current liabilities			
Provision for Long Service Leave		43,342	-
Total current liabilities		43,342	-
Total liabilities		4,353,437	3,953,793
Net assets		34,778,332	68,237,995
Equity			
Issued capital	15	126,468,060	102,939,352
Reserves		(9,607,522)	12,733,303
Accumulated losses	17	(82,082,206)	(47,434,660)
Total equity attributable to owners of Atlantic Lithium Limited		34,778,332	68,237,995

The above consolidated statement of financial position should be read in conjunction with the accompanying notes.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 30 June 2022

	Issued Capital	Accumulated Losses	Share based payments reserve	Foreign currency translation reserve	Financial assets revaluation reserve	Demerger Reserve	Total Equity
	\$	\$	\$	\$	\$	\$	\$
Balance at 1 July 2020	70,188,081	(42,537,119)	12,628,683	65,397	-	-	40,345,042
Loss for the year	-	(4,897,541)	-	-	-	-	(4,897,541)
Other comprehensive loss	-	-	-	(1,359,173)	301,815	-	(1,057,358)
Total comprehensive loss for the year	-	(4,897,541)	-	(1,359,173)	301,815	-	(5,954,899)
Transactions with owners as owners							
Shares issued during the year	33,798,117	-	-	-	-	-	33,798,117
Share issue costs	(1,046,846)	-	-	-	-	-	(1,046,846)
Share based payments	-	-	1,096,581	-	-	-	1,096,581
Balance at 30 June 2021	102,939,352	(47,434,660)	13,725,264	(1,293,776)	301,815	-	68,237,995
Balance at 1 July 2021	102,939,352	(47,434,660)	13,725,264	(1,293,776)	301,815	-	68,237,995
Loss for the year	-	(34,647,546)	-	-	-	-	(34,647,546)
Other comprehensive loss	-	-	-	(5,774,884)	207,770	-	(5,567,114)
Total comprehensive loss for the year	-	(34,647,546)	-	(5,774,884)	207,770	-	(40,214,660)
Transactions with owners as owners							
Shares issued during the year	23,592,802	-	-	-	-	-	23,592,802
Share issue costs	(64,094)	-	-	-	-	-	(64,094)
Capital Reduction and In-Specie Distribution (Refer to Note 20)	-	-	-	-	-	(28,794,153)	(28,794,153)
Share based payments	-	-	12,020,442	-	-	-	12,020,442
Balance at 30 June 2022	126,468,060	(82,082,206)	25,745,706	(7,068,660)	509,585	(28,794,153)	34,778,332

The above consolidated statement of changes in equity should be read in conjunction with the accompanying notes.

CONSOLIDATED STATEMENT OF CASH FLOWS
For the year ended 30 June 2022

		2022	2021
	Notes	\$	\$
Cash flows from operating activities			
Payments to suppliers and employees (including GST)		(5,380,854)	(2,833,379)
Interest paid		(2,141)	(23,873)
Government grants received		-	56,056
Net cash flows from operating activities	19	(5,382,995)	(2,801,196)
Cash flows from investing activities			
Refunds from security deposits		2,500	3,000
Cash divested on demerger of subsidiary	20	(7,238,862)	-
Purchase of Investment		-	(100,000)
Purchase of property, plant and equipment		(97,619)	(207,649)
Piedmont Contributions from farm-in arrangement	10/13	15,451,041	-
Payments for exploration and evaluation assets		(20,772,143)	(14,343,969)
Net cash flows from investing activities		(12,655,083)	(14,648,618)
Cash flows from financing activities			
Proceeds from the issue of shares		23,592,802	28,859,855
Transactions costs on the issue of shares		(100,288)	(98,425)
Net cash flows from financing activities		23,492,514	28,761,430
Net increase / (decrease) in cash and cash equivalents		5,454,436	11,311,616
Cash and cash equivalents at the beginning of the year		19,135,463	7,331,643
Net foreign exchange impact		(708,249)	492,204
Cash and cash equivalents at the end of the year	9	23,881,650	19,135,463

The above consolidated statement of cash flows should be read in conjunction with the accompanying notes.

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies

Corporate Information

Atlantic Lithium Limited (the parent entity or the Company) is a public company limited by shares incorporated and domiciled in Australia. The Group's registered office is located at Level 33, Australia Square, 264 George Street, Sydney, NSW 2000.

Atlantic Lithium Limited and its subsidiaries (together referred to as "the Group") are a lithium focused mineral exploration and development company with an advanced lithium pegmatite asset in Ghana and lithium pegmatite exploration assets in Ghana and Ivory Coast.

Basis of Preparation

These consolidated financial statements are a general purpose financial report that has been prepared in accordance with International Financial Reporting Standards, including IFRIC Interpretations, other authoritative pronouncements of the International Accounting Standards Board. The Group is considered a for-profit entity for the purpose of International Financial Reporting.

The consolidated financial statements covers the Group comprising of Atlantic Lithium Limited and its subsidiaries and is presented in Australian dollars.

Going concern

The consolidated financial statements have been prepared on a going concern basis which contemplates the continuity of normal business activities and the realisation of assets and discharge of liabilities in the ordinary course of business. The Group has not generated revenues from operations. For the year ended 30 June 2022, the Group generated a loss of \$34,647,546 and incurred operating cash outflows of \$5,382,995. As at 30 June 2022, the Group had cash and cash equivalents of \$23,881,650 and net assets of \$34,778,332. The Directors note the following with regards to the ability of the Consolidated entity to continue as a going concern:

- Atlantic Lithium Limited has been funded under a co-development agreement with Piedmont Lithium Inc by solely funding US\$17.0m towards studies and exploration and US\$70.0m towards mine capex. Any additional expenditure or cost savings beyond the Initial Funding or cost savings for the completion of the Definite Feasibility study and development of the Ewoyaa Lithium Project will be shared equally between the company and Piedmont. As at the date of this report the group has fully utilised the initial US\$17.0m funding and ongoing costs to complete the exploration and DFS are currently shared.
- The Directors expect that while current funds and funding would be sufficient to meet minimum program of exploration and part of the Capex to build the mine, additional funds would be required. The Consolidated entity has previously raised funds through share placements and capital raisings from new and existing shareholders.
- The Directors have the ability to schedule activities and hence expenditure in accordance with the availability of funds and their cash forecasts.

Whilst the events and conditions noted above indicate the existence of a material uncertainty that may cast significant doubt regarding the Company's ability to continue as a going concern, the Directors are confident that they will be able to secure the additional funds if required, and that the going concern basis of preparation for the financial report is appropriate. Based on their previous experience and success in raising capital the Directors are confident, these additional funds can be obtained to complete the Ewoyaa Lithium Project.

If for any reason the Consolidated entity is unable to continue as a going concern, it would impact on the Consolidated entity's ability to realise assets at their recognised values and to extinguish liabilities in the normal course of business at the amounts stated in the consolidated financial statements.

The financial report does not include any adjustments relating to the amounts or classification of recorded assets or liabilities that might be necessary if the Consolidated entity does not continue as a going concern.

Reporting basis and conventions

The consolidated financial statements have been prepared on an accruals basis and is based on historical costs except for listed investments which have been measured at market value at the end of each reporting period.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

The following is a summary of the material accounting policies adopted by the Group in the preparation of the consolidated financial statements.

Accounting Policies

(a) New Accounting Standards and Interpretations

The accounting policies adopted are consistent with those of the previous financial year. The consolidated entity has adopted all the new or amended Accounting Standards and Interpretations issued by the International Financial Reporting Standard board that are mandatory for the current reporting period. The adoption of these new or amended accountings standards did not have a significant impact to the interim consolidated financial statements. Any new or amended Accounting Standards or Interpretations that are not yet mandatory have not been early adopted.

(b) Basis of Consolidation

The consolidated financial statements comprise the financial statements of Atlantic Lithium Limited and its subsidiaries as at and for the period ended 30 June each year.

Subsidiaries

Subsidiaries are all those entities over which the consolidated entity has control. The consolidated entity controls an entity when the consolidated entity is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated

from the date on which control is transferred to the consolidated entity. They are de-consolidated from the date that control ceases.

The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies. In preparing the consolidated financial statements, all intercompany balances, transactions, unrealised gains and losses resulting from intra-group transactions and dividends have been eliminated in full.

Subsidiaries are fully consolidated from the date on which control is obtained by the Group and cease to be consolidated from the date on which control is transferred out of the Group.

Investments in subsidiaries held by Atlantic Lithium Limited are accounted for at cost in the separate financial statements of the parent entity less any impairment charges. Dividends received from subsidiaries are recorded as a component of other revenues by the parent entity, and do not impact the recorded cost of the investment. Upon receipt of dividend payments from subsidiaries, the parent entity will assess whether any indicators of impairment of the carrying value of the investment in the subsidiary exist. Where such indicators exist, to the extent that the carrying value of the investment exceeds its recoverable amount, an impairment loss is recognised.

The acquisition of subsidiaries is accounted for using the acquisition method of accounting. The acquisition method of accounting involves recognising at acquisition date, separately from goodwill, the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree. The identifiable assets acquired and the liabilities assumed are measured at their acquisition date fair values.

The difference between the above items and the fair value of consideration (including the fair value of any pre-existing investment in the acquiree) is goodwill or discount on acquisition.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill forms part of a cash generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash generating unit retained.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

Non-controlling interests are allocated their share of net profit after tax in the statement of profit or loss and other comprehensive income and presented within equity in the consolidated statement of financial position, separately from the equity of the owners of the parent entity.

Losses are attributed to the non-controlling interest even if that results in a deficit balance.

A change in ownership interest of a subsidiary that does not result in a loss of control, is accounted for as an equity transaction.

(c) Business Combinations

Business combinations are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition date fair values of the assets transferred by the acquirer, the liabilities incurred by the acquirer to former owners of the acquiree and the equity issued by the acquirer, and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with contractual terms, economic conditions, the Group's operating or accounting policies and other pertinent conditions as at the acquisition date. If the business combination is achieved in stages, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value through profit and loss.

Any contingent consideration to be transferred by the acquirer will be recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration which is deemed to be an asset or liability will be recognised either in profit or loss or as a change to other comprehensive income. If the contingent consideration is classified as equity, it is not remeasured.

(d) Operating Segments

An operating segment is a component of an entity that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance and for which discrete financial information is available. This may include start-up operations which are yet to earn revenues.

Operating segments that meet the quantitative criteria as prescribed by IFRS 8, Operating Segments are reported separately. However, an operating segment that does not meet the quantitative criteria is still reported separately where information about the segment would be useful to users of the financial statements.

Information about other operating segments that are below the quantitative criteria are combined and disclosed in a separate category for "all other segments".

(e) Farm-in Arrangement

While the farmee is contributing 100% of the exploration costs towards a Definitive Feasibility Study, the Group will capitalise expenditure and recognise cash payments due or received to offset that expenditure. The Group have not recognised any consideration in respect of the value of the work to be performed by the farmee and instead will carry the assets at the previous cost of the full interest reduced by the amount of any cash consideration due or received for entering the agreement until such time as the farmee have earned an interest. \$17,438,205 was offset against Exploration and Evaluation Assets as at 30 June 2022.

(f) Demerger

The liability to distribute is recognised when the in-specie distribution is appropriately authorised and is no longer at the discretion of the Company. For the demerger this was the date when declaration of in-specie distribution was approved by the shareholders. The liability to distribute non-cash assets as an in-specie distribution to its owners is measured at the fair value of the net assets to be distributed. The Company remeasures the liability at each reporting date and at settlement,

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

with changes recognised directly in equity. The Company recognises the difference between the dividend paid and the carrying amount of the net assets distributed in profit or loss.

(g) Cash and Cash Equivalents

For the statement of cash flows, cash and cash equivalents include cash on hand, deposits held at call with banks, other short term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within short-term borrowings in current liabilities on the statement of financial position.

(h) Trade and Other Receivables

Receivables generally have 30-60 day terms, are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less an allowance for impairment. The Group has not recognised any expense in profit or loss in respect of the expected credit losses for the year ended 30 June 2022 (2021: nil). Based on the historical recovery and forward-looking information of receivables, the Group considers that no allowance for expected credit losses is appropriate.

Receivables include \$1,987,164 from Piedmont Lithium Inc who has agreed to fund expenditure incurred on Ewoyaa Lithium Project and earn-in to up to 50% of the Cape Coast Lithium Portfolio in Ghana.

(i) Financial Instruments

Recognition and Initial Measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets and financial liabilities are recognised in the Group statement of financial position when the Group becomes a party to the contractual provisions of the instrument. Financial assets and financial liabilities are only offset when there is a currently enforceable legal right to offset the recognised amounts and the Group intends to settle on a net basis or realise the asset and liability simultaneously.

Financial instruments are generally measured at initial recognition fair value and adjusted for transactions costs where the instrument is not classified as at fair value through profit or loss. Transaction costs related to instruments classified as at fair value through profit or loss are expensed to profit or loss immediately. Financial instruments are classified and measured as set out below.

Financial assets

Financial assets at amortised cost

Financial assets are measured at amortised cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principle amount outstanding.

Financial assets at amortised costs are subsequently measured using the effective interest (EIR) method and are subject to an impairment assessment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments)

Upon initial recognition the Group can elect to classify irrevocably its equity investments as equity instruments designated a fair value through OCI when they meet the definition of equity under IAS 32 Financial Instruments: Presentation and are not held for trading. The classification is determined on an instrument-by-instrument basis. Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognised as other income in the statement of profit or loss and other comprehensive income when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

(j) Property, Plant & Equipment

Property, plant & equipment are stated at historical cost less accumulated depreciation and any accumulated impairment losses.

The cost of property, plant & equipment constructed within the Group includes the cost of materials, direct labour, borrowing costs and an appropriate portion of fixed and variable costs. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the profit or loss during the financial year in which they are incurred.

Depreciation

The depreciable amount of all property, plant & equipment is depreciated over their useful life to the Group commencing from the time the asset is held ready for use. Leasehold improvements are depreciated over the shorter of either the unexpired period of the lease or the estimated useful lives of the improvements.

The depreciation rates used for each class of assets are:

Class of Property, plant & equipment	Depreciation
Plant & Equipment	10% - 30% Straight line
Office Equipment	33.3% Straight line
Motor Vehicles	25% Straight line

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These are included in the statement of profit or loss and other comprehensive income.

Derecognition

An item of property, plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

(k) Exploration and Evaluation Assets

Exploration and evaluation (E&E) expenditure incurred is accumulated in respect of each identifiable area of interest. Such expenditures comprise net direct costs and an appropriate portion of related overhead expenditure but do not include overheads or administration expenditure not having a specific nexus with a particular area of interest. These assets are only carried forward to the extent that they are expected to be recouped through the successful development of the area or where activities in the area have not yet reached a stage which permits reasonable assessment of the existence of economically recoverable reserves and active or significant operations in relation to the area are continuing.

The exploration and evaluation expenditures incurred in respect of earn-in arrangements have been capitalised in accordance with IFRS 6. In summary:

- The farmor will not record any expenditure (whether this would otherwise have been capitalised or expensed immediately) that is settled by the farmee
- The farmor does not recognise a gain or loss on the basis of the partial disposal of any E&E asset that has already been capitalised. Instead, any proceeds received that are not attributable to future expenditure are simply credited against the carrying amount of any existing E&E asset
- To the extent that the proceeds received from the farmee exceed the carrying amount of any E&E asset that has already been capitalised by the farmor, this excess is recognised as a gain in profit or loss.

A regular review has been undertaken on each area of interest to determine the appropriateness of continuing to carry forward assets in relation to that area of interest.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

(k) Exploration and Evaluation Assets (continued)

A provision is raised against exploration and evaluation expenditure where the Directors are of the opinion that the carried forward net cost may not be recoverable or the right of tenure in the area lapses. The increase in the provision is charged against the results for the year. Accumulated costs in relation to an abandoned area are written off in full against profit in the year in which the decision to abandon the area is made.

When production commences, the accumulated costs for the relevant area of interest are amortised over the life of the area according to the rate of depletion of the economically recoverable reserves.

Costs of site restoration are provided over the life of the area from when exploration commences and are included in the costs of that stage. Site restoration costs include the dismantling and removal of mining plant, equipment and building structure, waste removal, and rehabilitation of the site in accordance with clauses of mining permits. Such costs have been determined using estimates of future costs, current legal requirements and technology on an undiscounted basis.

Any changes in the estimates for the costs are accounted on a prospective basis. In determining the costs of site restoration, there is uncertainty regarding the nature and extent of the restoration due to community expectations and future legislation. Accordingly, the costs have been determined on the basis that restoration will be completed within one year of abandoning the site.

(l) Impairment of Non-Financial Assets

At each reporting date, the Group reviews the carrying values of its tangible assets to determine whether there is any indication that those assets have been impaired. If such an indication exists, the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, is compared to the asset's carrying value. Any excess of the asset's carrying value over its recoverable amount is expensed to the profit or loss.

Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

(m) Trade and Other Payables

Trade and other payables are carried at amortised cost and due to their short-term nature, they are not discounted. They represent liabilities for goods and services provided to the Group prior to the end of the financial year that are unpaid and arise when the Group becomes obliged to make future payments in respect of the purchase of these goods and services. The amounts are unsecured and are usually paid within 30-60 days of recognition.

(n) Provisions and Employee Benefits

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is possible that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

When the Group expects some or all of a provision to be reimbursed, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the statement of profit or loss and other comprehensive income net of any reimbursement.

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the reporting date. The discount rate used to determine the present value reflects current market assessments of the time value of money and the risks specific to the liability. The increase in the provision resulting from the passage of time is recognised in finance costs.

Employee benefits

(i) Wages, salaries, annual leave, and long service leave

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

(n) Provisions and Employee Benefits (continued)

Liabilities for wages and salaries, including non-monetary benefits and annual leave and long service leave expected to be settled within 12 months of the reporting date are recognised in respect of employees' services up to the reporting date. They are measured at the amounts expected to be paid when the liabilities are settled. Expenses for non-accumulating sick leave are recognised when the leave is taken and measured at the rates paid or payable.

(ii) Long service leave

The liability for annual leave and long service leave not expected to be settled within 12 months of the reporting date are measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date. Consideration is given to expected future wages and salary levels, experience of employee departures, and periods of service. Expected future payments are discounted using market yields at the reporting date on Australian corporate bonds with terms to maturity and currencies that match, as closely as possible, the estimated future cash outflows.

(o) Leases

The Group considers whether a contract is or contains a lease. For those contracts that fall within the exemptions of IFRS 16 and are classified as short term, these are charged as expenses on a straight-line basis over the period of the lease. For all other leases, the Group recognises a right-of-use asset and a lease liability on the Statement of Financial Position. For the year ended 30 June 2022, the Group was not party to any leases that are not classified as short term.

(p) Share Capital

Ordinary shares are classified as equity at the time that they are issued. Costs directly attributable to the issue of new shares or options are shown as a deduction from the equity proceeds, net of any income tax benefit.

(q) Share-Based Payments

The Group may provide benefits to Directors, employees or consultants in the form of share-based payment transactions, whereby services may be undertaken in exchange for shares or options over shares ("equity-settled transactions").

The fair value of options granted to Directors, employees and consultants is recognised as an expense with a corresponding increase in equity (share based payments reserve). The fair value is measured at grant date and recognised over the period during which the recipients become unconditionally entitled to the options. Fair value is determined using a Black-Scholes or Monte Carlo option pricing model. An expense is still recognised for options that do not ultimately vest because a market condition was not met.

Where the terms of options are modified, the expense continues to be recognised from grant date to vesting date as if the terms had never been changed. In addition, at the date of the modification, a further expense is recognised for any increase in fair value of the transaction as a result of the change.

Where options are cancelled, they are treated as if vesting occurred on cancellation and any unrecognised expenses are taken immediately to the profit or loss. If new options are substituted for the cancelled options and designated as a replacement, the combined impact of the cancellation and replacement options are treated as if they were a modification.

(r) Interest and Other Income

Interest

Interest revenue is recognised as interest accrues using the effective interest rate method. This is a method of calculating the amortised cost of a financial asset and allocating the interest income over the relevant period using the effective interest rate, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset. All revenue is stated net of the amount of goods and services tax (GST).

Government grants

Government grants are recognised where there is reasonable assurance that the grant will be received and all attached conditions will be complied with.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

(s) Income Tax

The income tax expense for the period is the tax payable on the current period's taxable income rate for each jurisdiction adjusted by changes in deferred tax assets liabilities attributable to temporary differences between the tax base of assets and liabilities and their carrying amounts in the financial statements, and to unused tax losses.

The charge for current income tax expense is based on the profit for the year adjusted for any non-assessable or disallowed items. It is calculated using the tax rates that have been enacted or are substantially enacted by the reporting date.

Deferred tax is recognised for all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. No deferred income tax will be recognised from the initial recognition of an asset or liability, excluding a business combination, where there is no effect on accounting or taxable profit or loss.

Deferred tax is calculated at the tax rates expected to apply to the period when the asset is realised or liability is settled. Deferred tax is recognised in the statement of profit or loss and other comprehensive income except where it relates to items that may be recognised directly in equity, in which case the deferred tax is adjusted directly against equity. Deferred income tax assets are recognised to the extent that it is probable that future tax profits will be available against which deductible temporary differences can be utilised.

The amount of benefits brought to account or which may be realised in the future is based on the assumption that no adverse change will occur in income taxation legislation and the anticipation that the group will derive sufficient future assessable income to enable the benefit to be realised and comply with the conditions of deductibility imposed by the law.

Current tax assets and liabilities are offset where a legally enforceable right of set-off exists and it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liability will occur. Deferred tax assets and liabilities are offset where a legally enforceable right of set-off exists, the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liability will occur in future periods in which significant amounts of deferred tax assets or liabilities are expected to be recovered or settled.

(t) GST

Revenues, expenses and assets are recognised net of GST except where GST incurred on a purchase of goods and services is not recoverable from the taxation authority, in which case the GST is recognised as part of the cost of acquisition of the asset or as part of the expense item.

Receivables and payables are stated with the amount of GST included. The net amount of GST recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

Cash flows are included in the statement of cash flows on a gross basis and the GST component of cash flows arising from investing and financing activities, which is recoverable from, or payable to, the taxation authority, are classified as operating cash flows.

Commitments and contingencies are disclosed net of the amount of GST recoverable from, or payable to, the taxation authority.

(u) Earnings per Share

Basic earnings per share is calculated as net profit (loss) attributable to members of the parent entity, adjusted to exclude any costs of servicing equity other than ordinary shares, divided by the weighted average number of ordinary shares, adjusted for any bonus element.

Diluted earnings per share adjust the figures used in the determination of basic earnings per share to take into account:

- The after tax effect of interest and other financing costs associated with dilutive potential ordinary shares; and
- The weighted average number of additional ordinary shares that would have been outstanding assuming the conversion of all dilutive potential ordinary shares.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

(v) Foreign Currencies

Items included in the financial statements of each of the Group entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in Australian dollars, which is the Company's functional and presentation currency.

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in profit or loss.

Exchange differences arising from the translation of financial statements of foreign subsidiaries are taken to the foreign currency translation reserve at the reporting date.

(w) Comparatives

When required by International Financial Reporting Standards, comparative figures have been adjusted to conform to changes in presentation for the current financial year.

(x) Fair value measurement

When an asset or liability, financial or non-financial, is measured at fair value for recognition or disclosure purposes, the fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date; and assumes that the transaction will take place either: in the principle market; or in the absence of a principal market, in the most advantageous market.

Fair value is measured using the assumptions that market participants would use when pricing the asset or liability, assuming they act in their economic best interest. For non-financial assets, the fair value measurement is based on its highest and best use. Valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, are used, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

Assets and liabilities measured at fair value are classified, into three levels, using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. Classifications are reviewed each reporting date and transfers between levels are determined based on a reassessment of the lowest level input that is significant to the fair value measurement.

For recurring and non-recurring fair value measurements, external valuers may be used when internal expertise is either not available or when the valuation is deemed to be significant. External valuers are selected based on market knowledge and reputation. Where there is a significant change in fair value of an asset or liability from one period to another, an analysis is undertaken, which includes a verification of the major inputs applied in the latest valuation and a comparison, where applicable, with external sources of data.

(y) Critical Accounting Estimates and Judgments

The Directors evaluate estimates and judgments incorporated into the consolidated financial statements based on historical knowledge and best available current information. Estimates assume a reasonable expectation of future events and are based on current trends and economic data, obtained both externally and within the Group.

Key estimates – impairment of non-financial assets

The Group assesses impairment at each reporting date by evaluating conditions specific to the Group that may lead to impairment of assets. Where an impairment trigger exists, the recoverable amount of the asset is determined. Where applicable, value-in-use calculations performed in assessing recoverable amounts incorporate a number of key estimates.

Key judgments – exploration & evaluation assets

The Group performs regular reviews on each area of interest to determine the appropriateness of continuing to carry forward costs in relation to that area of interest. These reviews are based on detailed surveys and analysis of drilling results performed to reporting date.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 1. Summary of Significant Accounting Policies (continued)

Accounting Policies (continued)

The Group performs regular reviews on each area of interest to determine the appropriateness of continuing to carry forward costs in relation to that area of interest. These reviews are based on detailed surveys and analysis of drilling results performed to reporting date.

The Directors have assessed that for the exploration and evaluation assets recognised at 30 June 2022, the facts and circumstances do not suggest that the carrying amount of an asset may exceed its recoverable amount.

Exploration and evaluation assets written off for year ended 30 June 2022 was \$25,934 (2021: \$1,000,280).

Exploration and evaluation assets at 30 June 2022 were \$11,050,354 (2021: \$51,449,462).

On 24 December 2021 the Group completed the demerger of its gold exploration and evaluation assets at fair value of \$28,794,153 in Ivory Coast and Chad by way of a capital reduction and in-specie distribution to eligible shareholders. The fair value of the exploration and evaluation assets was initially valued using the mid-point of a range derived from multiple valuation methodologies for each project. On further analysis it was noted that this mid-point did not accurately reflect the true fair value of each project due to the high degree of emphasis the valuation placed on the historical expenditure method. In the Directors view, this method did not take into account the results of the early stage exploration works on some projects. On a more detailed review of the report other methods of valuation were deemed more appropriate for the earlier stage projects which resulted in those projects being assigned a lower fair value. The impact of this was an additional fair value write down, pre-demerger, of \$7,475,828 through profit and loss and a corresponding reduction in the demerger reserve.

Key judgments – share based payment transactions

The Group measures the cost of equity settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. The fair value is determined by using the Black-Scholes model or Monte Carlo model taking into account the terms and conditions upon which the instruments were granted. The accounting estimates and assumptions relating to equity settled share based payments would have no impact on the carrying amounts of assets and liabilities within the next annual reporting period but may impact the profit or loss and equity. The key inputs used in the Black-Scholes model or Monte Carlo model are disclosed in Note 16.

	2022 \$	2021 \$
Note 2. Income		
- Government grant -Covid 19 cash flow boost		56,056
Total Income	-	56,056
Note 3. Profit / (Loss)		
Included in the profit / (loss) are the following specific expenses:		
Depreciation		
-Office equipment	10,410	5,606
-Plant & equipment	6,417	6,417
Defined contributions superannuation expense	72,117	29,242
Interest and Finance Charges	1,644	23,872
Project generation costs	-	3,756
Unrealised foreign exchange (gains) losses	927,941	(443,145)
Directors and Other Key Management Personnel short term benefits	1,816,621	1,725,305
Administration services (refer Note 21(d))	-	192,000

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

	2022 \$	2021 \$
Note 4. Income Tax		
Components of tax expense recognised directly in equity		
Net deferred tax credited directly to equity	(27,468)	(448,649)
Net deferred tax - debited directly to financial assets revaluation reserve	90,750	129,349
	63,282	(319,300)
The prima facie tax on profit / (loss) before income tax is reconciled to the income tax expense as follows:		
Prima facie tax on profit / (loss) before income tax at 30% (2021: 30%)	(10,413,248)	(1,373,473)
Add tax effect of:		
Permanent differences	-	98,333
Current tax loss not recognised	9,203,885	1,294,413
Share based payments	3,606,132	300,027
Temporary differences derecognised	508,933	-
Prior year under / over	12,841	-
Other	4,048	-
Reversal of DTL on exploration and evaluation costs from acquisition of Tekton investment (part of Demerger with Ricca Resources)	(2,985,873)	-
Income tax expense	(63,282)	319,300
Deferred Tax Asset (at 30%)		
Recognised temporary differences	355,742	582,531
Recognised unused tax losses	-	1,651,859
Payables and provisions	-	103,955
Total deferred tax assets recognised	355,742	2,338,345
Deferred Tax Liability		
Assessable temporary differences	(194,018)	(417,993)
Financial Assets at Fair Value through Other Comprehensive Income	(161,724)	(70,972)
Exploration and evaluation assets	-	(1,849,380)
Total deferred tax liabilities recognised	(355,742)	(2,338,345)
Net deferred tax recognised	-	-
Unrecognised deferred tax assets comprised of:		
Deferred tax assets: Net unrecognised tax losses	16,941,049	6,026,526
Deferred tax assets: Gross unrecognised tax losses	56,470,162	20,088,419

In order to recoup carried forward losses in future periods, either the Continuity of Ownership Test (COT) or Same Business Test must be passed. The majority of losses are carried forward at 30 June 2022 under COT.

Deferred tax assets which have not been recognised as an asset, will only be obtained if:

- (i) the Company derives future assessable income of a nature and of an amount sufficient to enable the losses to be realised;
- (ii) the Company continues to comply with the conditions for deductibility imposed by the law; and
- (iii) no changes in tax legislation adversely affect the Company in realising the losses.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 5. Key Management Personnel

Key Management Personnel Compensation

The total remuneration of Key Management Personnel for the Group for the year was as follows:

	2022 \$	2021 \$
Short term employee benefits	1,816,621	1,725,305
Post-employment benefits	52,295	36,917
Share based payments	11,776,386	888,233
Total	13,645,302	2,650,455

Refer to the Remuneration Report contained in the Directors' Report for details of the remuneration paid or payable to each member of the Group's Key Management Personnel.

Note 6. Dividends and Franking Credits

There were no dividends paid or recommended during the year or since the end of the year. There are no franking credits available to shareholders of the Company.

Note 7. Auditors Remuneration

Amounts received or due and receivable by BDO Audit Pty Ltd

An audit or review of the financial report of the entity or any other entity in the consolidated group

	2022 \$	2021 \$
	70,813	39,000
	70,813	39,000

Note 8. Loss per Share (EPS)

(a) Loss

Loss used to calculate basic and diluted EPS

	(34,647,546)	(4,897,541)
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(b) Weighted average number of shares and options

Weighted average number of ordinary shares outstanding during the year, used in calculating basic loss per share

Weighted average number of dilutive options and performance rights outstanding during the year

Weighted average number of ordinary shares and potential ordinary shares outstanding during the year, used in calculating diluted loss per share

	Number of Shares	Number of Shares
	565,084,093	436,104,705
	-	-
	565,084,093	436,104,705

The options and performance rights are considered non-dilutive as the Company is loss making. Options and performance rights may become dilutive in the future.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

	2022	2021
	\$	\$
Note 9. Cash and Cash Equivalents		
Cash at bank	23,881,650	19,135,463
	23,881,650	19,135,463

	2022	2021
	\$	\$
Note 10. Trade and Other Receivables		
GST receivable	56,083	46,300
Piedmont farm in contributions receivable (refer note 13)	1,987,164	-
Other receivables	261,611	23,781
	2,304,858	70,081

Receivables are non-interest bearing and are generally on 30-60 day terms. No allowance for credit loss has been recorded for the current and previous financial year.

Due to the short term nature of these receivables, their carrying value is assumed to approximate fair value. The maximum exposure to credit risk is the carrying value of receivables. Collateral is not held as security.

	2022	2021
	\$	\$
Note 11. Other Financial Assets –Non-current		
Security deposits	7,500	10,000
Investment in shares at fair value through Other Comprehensive Income	1,225,020	926,500
	1,232,520	936,500

Investment in shares at fair value through Other Comprehensive Income

-Opening Balance at 1 July	926,500	129,000
-Additions	-	366,336
-Security deposit refunded	(2,500)	-
Fair Value adjustment through other comprehensive income	298,520	431,164
	1,222,520	926,500

Investment in shares at net fair value through other comprehensive income comprise an investment in the ordinary issued capital of Aus Tin Mining Ltd \$20 (2021: \$4,000) and Australasian Metals Limited (formerly Australasian Gold Limited) \$1,100,000 (2021: \$797,500), both listed on the Australian Securities Exchange and an investment in the ordinary issued capital of Auburn Resources Ltd \$125,000 (2021: \$125,000), an unlisted public company incorporated in Australia. Auburn Resources Ltd valuation is based on latest share capital placement in July 2021 at 12.5c a share. The group holds 1,000,000 shares in Auburn Resources Ltd.

The investment in shares are equity instruments under IFRS 9 which are not held for trading. The Group made an irrevocable election on initial recognition to designate these equity instruments at fair value through other comprehensive income.

Gains or losses will be recognised in OCI and never reclassified from equity to profit or loss.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

	2022	2021
	\$	\$
Note 12. Property, Plant and Equipment		
Plant & Equipment – at cost	75,555	570,164
Accumulated depreciation	(69,872)	(554,105)
Written down value	5,683	16,059
Office equipment – at cost	41,680	55,599
Accumulated depreciation	(20,999)	(14,815)
Written down value	20,681	40,784
Motor Vehicle – at cost	303,729	927,060
Accumulated depreciation	(120,956)	(648,649)
Written down value	182,773	278,411

Reconciliation of carrying amounts at the beginning and of the year

	Motor Vehicle	Plant & Equipment	Office Equipment	Total
	\$	\$	\$	\$
Year ended 30 June 2022				
At 1 July 2021 net of accumulated depreciation	278,411	16,059	40,784	335,254

Effect of foreign exchange on opening balances	(41,218)	21	105	(41,092)
Additions	88,669	-	9,279	97,948
Assets classified as held for distribution to owners (refer Note 20)	(39,078)	-	(15,837)	(54,915)
Depreciation charged to exploration and evaluation	(104,011)	(3,980)	(3,240)	(111,231)
Depreciation charge for the year	-	(6,417)	(10,410)	(16,827)
At 30 June 2022 net of accumulated depreciation	182,773	5,683	20,681	209,137

Year ended 30 June 2021

At 1 July 2020 net of accumulated depreciation	290,687	55,326	2,778	348,791
Effect of foreign exchange on opening balances	(12,202)	(1,048)	-	(13,250)
Additions	159,811	-	47,838	207,649
Disposals	-	-	-	-
Depreciation charged to exploration and evaluation	(159,885)	(31,802)	(4,226)	(195,913)
Depreciation charge for the year	-	(6,417)	(5,606)	(12,023)
At 30 June 2021 net of accumulated depreciation	278,411	16,059	40,784	335,254

	2022	2021
	\$	\$

Note 13. Exploration and Evaluation Assets

Exploration and evaluation assets	11,050,354	51,449,462
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Movements in carrying amounts

Balance at the beginning of the year	51,449,462	34,017,466
Effect of foreign exchange on opening balance	(3,272,244)	(1,214,063)
Additions	18,247,469	18,956,991
Piedmont receipts from farm-in arrangements (1)	(17,438,205)	-
Exploration and evaluation assets distributed to owners (refer to Note 20)	(37,910,194)	-
Acquisition of Joy Transporters Limited	-	955,684
Disposals	-	(266,336)
Written-off during the year	(25,934)	(1,000,280)
Balance at the end of the year	11,050,354	51,449,462

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

The recoverability of the carrying amount of exploration and evaluation assets is dependent on the successful development and commercial exploitation or alternatively, sale of the respective areas of interest.

- (1) On 31 August 2021 the company entered into an agreement with Piedmont Lithium Inc. to fund expenditure incurred on Ewoyaa Lithium Project and earn-in to up to 50% of the Cape Coast Lithium Portfolio in Ghana. Funding consists of US\$17m for regional exploration and DFS and US\$70m for capex. Piedmont Lithium Inc. also invested US\$16m in ordinary shares of the company on 31st August 2021 as part of the agreement (see note 15).

Piedmont is an US integrated supplier of raw materials and minerals supporting the electric vehicles and industrial markets. Piedmont is to earn-in to up to 50% of the Company's Cape Coast Lithium Portfolio ("CCLP") in Ghana, including Ewoyaa, in the following stages:

Stage 1: Investment into Atlantic Lithium Limited (c. US\$16m)

- On 31 August 2021, Piedmont subscribed for 54,000,000 new ordinary shares in the Company at a price of 20p per share (£10,800,000) with a further £720,000 committed via placing 2,880,000 shares at 25p, increasing its stake to 9.91% of the issued share capital of the Company.

Stage 2: Regional Exploration and DFS Funding (US\$17m)

- Piedmont to earn up to an initial 22.5% of CCLP, via sole funding, at completion of:
 - US\$5m towards an accelerated regional exploration programme to enhance the current Ewoyaa resource; and
 - US\$12m towards completing the Definitive Feasibility Studies ("DFS") for the Project:
 - the minimum "DFS criteria" is to deliver a 1.5 million tonnes per annum ("mtpa") to 2mtpa run-of-mine ("ROM") operation for an 8-year to 10-year life of mine ("LOM") respectively; and
 - any additional expenditure or savings will be shared equally between Atlantic Lithium and Piedmont

Stage 3: CAPEX Funding (US\$70m)

- Piedmont to earn a further 27.5% of CCLP via the funding of Capex of US\$70m for the Ewoyaa Project:
 - to deliver a 1.5mtpa to 2mtpa ROM operation for an 8-year to 10-year LOM respectively; and
 - any additional expenditure or savings will be shared equally.

Other key Terms:

- If the "DFS criteria" of Stage 2 is achieved and Piedmont elects by mutual agreement not to proceed to Stage 3, Piedmont will forfeit its Stage 2 interest.
- Piedmont is entitled to appoint one director to the Atlantic Lithium board on completion while maintaining an equity interest above or equal to 9% in Atlantic Lithium and,
- an offtake agreement for 50% of the annual life of mine lithium spodumene concentrate (SC6%) production where offtake pricing will be determined via a formula which is linked to the prevailing price of lithium products, ensuring Atlantic Lithium captures value-add margins.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

	2022	2021
	\$	\$
Note 14. Trade and Other Payables		
Trade payables	2,369,124	2,256,617
Sundry payables and accrued expenses	1,673,913	1,500,704
Employee benefits	260,441	196,472
GST Payable	6,617	-
	4,310,095	3,953,793

Trade payables are non-interest bearing and are generally on 30-60 day terms.
Due to the short term nature of these payables, their carrying value is assumed to approximate fair value.

	2022	2021
	\$	\$
Note 15. Issued Capital		
(a) Issued and paid up capital		
580,041,660 (2021: 516,114,246) ordinary shares fully paid	129,007,813	105,415,011
Share issue costs	(2,539,753)	(2,475,659)
	126,468,060	102,939,352

Ordinary shares participate in dividends and the proceeds on winding up the Company in proportion to the number of shares held. At shareholder meetings each ordinary share is entitled to one vote when a poll is called, otherwise each shareholder has one vote on a show of hands.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
For the year ended 30 June 2022

(b) Reconciliation of issued and paid-up capital	Number of Shares	\$
At 30 June 2020	404,513,660	71,616,893
On 4th August 2020, 572,656 £0.22 (equivalent to \$0.40) ordinary shares were issued for the Acquisition of CAPRI Metals SARL	572,656	227,266
On 4 August 2020, 571,309 £0.09 (equivalent to \$0.16) ordinary shares were issued to a contractor in partial consideration for services rendered	571,309	89,716
On 26 August 2020, 984,431 £0.13 (equivalent to \$0.24) ordinary shares were issued to a contractor in partial consideration for services rendered	984,431	233,453
On 28 October 2020, 169,231 £0.15 (equivalent to \$0.27) ordinary shares were issued to a contractor in partial consideration for services rendered	169,231	45,753
On 28 October 2020, 1,256,441 £0.14 (equivalent to \$0.26) ordinary shares were issued to a contractor in partial consideration for services rendered	1,256,441	320,526
On 28 October 2020, 600,000 options exercised on 25 January 2019 was paid. These were previously exercised through a interest free non-recourse loan		109,340
On 16 December 2020, 1,618,336 £0.15 (equivalent to \$0.27) ordinary shares were issued to a contractor in partial consideration for services rendered	1,618,336	429,302
On 17 December 2020, 1,550,388 £0.18 (equivalent to \$0.32) ordinary shares were issued for the acquisition of Bodite and Bianouan Gold Licenses	1,550,388	497,191
On 4th February 2021, 2,360,035 £0.23 (equivalent to \$0.40) ordinary shares were issued for the Acquisition of Joy Transporters Limited	2,360,035	955,686
On 4 February 2021, 1,024,307 £0.13 (equivalent to \$0.24) ordinary shares were issued to a contractor in partial consideration for services rendered	1,024,306	243,006
On 4 February 2021, 1,758,613 £0.11 (equivalent to \$0.20) ordinary shares were issued to a contractor in partial consideration for services rendered	1,758,613	347,624
On 4 May 2021, 466,156 £0.20 (equivalent to \$0.36) ordinary shares were issued on the exercise of fundraising warrants	466,156	167,156
On 12 May 2021, 1,185,733 £0.19 (equivalent to \$0.35) ordinary shares were issued to a contractor in partial consideration for services rendered	1,185,733	412,029
On 12 May 2021, 204,179 £0.20 (equivalent to \$0.36) ordinary shares were issued to a contractor in partial consideration for services rendered	204,179	73,670
August to March 2021, 33,928,772 £0.12 (equivalent to \$0.22) ordinary shares were issued on the exercise of fundraising Warrants	33,928,772	7,282,894
February to May 2021, 3,950,000 £0.12 (equivalent to \$0.22) ordinary shares were issued on the exercise of employee options	3,950,000	852,499
May to June 2021, 60,000,000 £0.20 (equivalent to \$0.36) ordinary shares were issued by way of a private placement	60,000,000	21,511,007
At 30 June 2021	516,114,246	105,415,011
On 29 July 2021, 750,000 £0.12 (equivalent to \$0.22) ordinary shares were issued on the exercise of employee options	750,000	166,909
On 31 August 2021, 54,000,000 £0.20 (equivalent to \$0.38) ordinary shares were issued by the way of subscription shares	54,000,000	20,304,145
On 31 August 2021, 2,880,000 £0.25 (equivalent to \$0.47) ordinary shares were issued by the way of a private placement	2,880,000	1,353,610
On 20 April 2022, 3,000,000 £0.12 (equivalent to \$0.21) ordinary shares were issued on the exercise of employee options	3,000,000	637,853
On 10 May 2022, 1,352,700 £0.30 (equivalent to \$0.53) ordinary shares were issued on the exercise of fundraising warrants	1,352,700	717,632
On 1 June 2022, 1,444,714 £0.12 (equivalent to \$0.21) ordinary shares were issued on the exercise of fundraising warrants	1,444,714	306,243
On 1 June 2022, 500,000 £0.12 (equivalent to \$0.21) ordinary shares were issued on the exercise of employee options	500,000	106,410
At 30 June 2022	580,041,660	129,007,813

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
For the year ended 30 June 2022

Note 15. Issued Capital (continued)

(c) Options and warrants

As at 30 June 2022, there were 69,000,000 (2021: 45,046,214) unissued ordinary shares of Atlantic Lithium Limited under option and warrant held as follows:

- 10,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.12. The options vested immediately and expire 31 August 2022.
- 4,500,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.12. The options vested immediately and expire 31 December 2022.
- 4,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.30. The options vested immediately and expire 31 December 2022.
- 5,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.40. The options vested immediately and expire 31 December 2022.
- 6,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.50. The options vested immediately and expire 31 December 2022.
- 3,500,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.30. The options vested immediately and expire 8 April 2023.
- 4,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.30. The options vested immediately and expire 18 August 2023.
- 5,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.40. The options vested immediately and expire 18 August 2023.
- 6,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.50. The options vested immediately and expire 18 August 2023.

- 8,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.70. The options vested immediately and expire 23 April 2024.
- 8,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.75. The options vested immediately and expire 23 April 2024.
- 5,000,000 unlisted options to take up one ordinary share in Atlantic Lithium Ltd at an exercise price of £0.80. The options vested immediately and expire 23 April 2024.

(d) Capital Risk Management

When managing capital, management's objective is to ensure the entity continues as a going concern as well as to maintain optimal returns to shareholders and benefits for other stakeholders. Management also aims to maintain a capital structure to ensure the lowest costs of capital available to the Group.

The Group's capital comprises equity as shown in the statement of financial position. The Group is not exposed to externally imposed capital requirements.

Note 16. Share Based Payments

The expense recognised for share based payments during the year is shown in the table below:

	2022	2021
	\$	\$
Expense arising from equity settled share-based payment transactions:		
Share options	10,238,285	391,496
Performance rights	1,759,208	606,831
Modification to Share Options	22,949	1,763
Share issue costs (equity)	-	96,491
	12,020,442	1,096,581

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 16. Share Based Payments (continued)

Modification to share based payments

On 22 April, 2022, the expiry dates of 19,500,000 options and 8,100,000 Performance Rights held by Mr Mascolo were amended by the Board of Directors. A Black-Scholes valuation was undertaken for the change of expiry dates and the resultant additional expense has been recognised in the current year's share based payments. Mr Mascolo's Performance Rights were deemed to have all conditions for vesting met.

Unlisted Options

Number of Options	Strike Price	Original Expiry Date	Amended Expiry Date
4,500,000	12 pence	24 June 2022	31 December 2022
4,000,000	30 pence	18 August 2023	31 December 2022
5,000,000	40 pence	18 August 2023	31 December 2022
6,000,000	50 pence	18 August 2023	31 December 2022

Unlisted Performance Rights

Number of Performance Rights	Maturity Price	Original Expiry Date	Amended Expiry Date
450,000	30 pence	18 August 2023	31 December 2022
450,000	35 pence	18 August 2023	31 December 2022
450,000	40 pence	18 August 2023	31 December 2022
450,000	45 pence	18 August 2023	31 December 2022
450,000	50 pence	18 August 2023	31 December 2022
450,000	55 pence	18 August 2023	31 December 2022
450,000	60 pence	18 August 2023	31 December 2022
450,000	65 pence	18 August 2023	31 December 2022
1,000,000	70 pence	18 August 2023	31 December 2022
1,500,000	75 pence	18 August 2023	31 December 2022
2,000,000	GBP1.00	18 August 2023	31 December 2022

On 13 June 2022, the expiry dates of 3,000,000 Director options and 7,000,000 ESOP Options were amended by the Board of Directors. A Black-Scholes valuation was undertaken for the change of expiry dates and the resultant additional expense has been recognised in the current year's share based payments.

Unlisted Director Options

Number of Options	Strike Price	Original Expiry Date	Amended Expiry Date
3,000,000	12 pence	24 June 2022	31 August 2022

Unlisted ESOP Options

Number of Options	Strike Price	Original Expiry Date	Amended Expiry Date
7,000,000	12 pence	24 June 2022	31 August 2022

Employee share option plan (ESOP)

Share options are granted to employees. The employee share option plan is designed to align participants' interests with those of shareholders by increasing the value of the Company's shares.

When a participant ceases employment after the vesting of their share options, the share options are forfeited after 90 days unless cessation of employment is due to termination for cause, whereupon they are forfeited immediately or death. The Company prohibits KMP from entering into arrangements to protect the value of unvested ESOP awards.

Each option can be exercised from vesting date to expiry date for one share with the exercise price payable in cash.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 16. Share Based Payments (continued)

Options and warrants granted

On 18 August 2021, 7,000,000 Atlantic Lithium Limited share options were granted to a Directors and Employees under the Employee Share Option Plan. The options are to take up one ordinary share in Atlantic Lithium Limited at £0.30 per share. The options vested immediately and are due to expire on 18 August 2023. On 22 April, 2022, the expiry dates of 4,000,000 options were amended to 31 December 2022.

On 18 August 2021, 9,000,000 Atlantic Lithium Limited share options were granted to a Directors and Employees under the Employee Share Option Plan. The options are to take up one ordinary share in Atlantic Lithium Limited at £0.40 per share. The options vested immediately and are due to expire on 18 August 2023. On 22 April, 2022, the expiry dates of 5,000,000 options were amended to 31 December 2022.

On 18 August 2021, 11,000,000 Atlantic Lithium Limited share options were granted to a Directors and Employees under the Employee Share Option Plan. The options are to take up one ordinary share in Atlantic Lithium Limited at £0.50 per share. The options vested immediately and are due to expire on 18 August 2023. On 22 April, 2022, the expiry dates of 6,000,000 options were amended to 31 December 2022.

On 23 November 2021, 1,000,000 Atlantic Lithium Limited options were granted to the Company's advisers. The options are to take up one ordinary share in Atlantic Lithium at £0.30 per share. The options vested immediately and are due to expire 18 August 2023.

On 23 November 2021, 1,000,000 Atlantic Lithium Limited options were granted to the Company's advisers. The options are to take up one ordinary share in Atlantic Lithium at £0.40 per share. The options vested immediately and are due to expire 18 August 2023.

On 23 November 2021, 1,000,000 Atlantic Lithium Limited options were granted to the Company's advisers. The options are to take up one ordinary share in Atlantic Lithium at £0.50 per share. The options vested immediately and are due to expire 18 August 2023.

On 22 April 2022, 8,000,000 Atlantic Lithium Limited share options were granted to a Directors under the Employee Share Option Plan. The options are to take up one ordinary share in Atlantic Lithium Limited at £0.70 per share. The options vested immediately and are due to expire on 23 April 2024.

On 22 April 2022, 8,000,000 Atlantic Lithium Limited share options were granted to a Directors under the Employee Share Option Plan. The options are to take up one ordinary share in Atlantic Lithium Limited at £0.75 per share. The options vested immediately and are due to expire on 23 April 2024.

On 22 April 2022, 5,000,000 Atlantic Lithium Limited share options were granted to a Directors under the Employee Share Option Plan. The options are to take up one ordinary share in Atlantic Lithium Limited at £0.80 per share. The options vested immediately and are due to expire on 23 April 2024.

The following table illustrates the number (no.) and weighted average exercise prices (WAEP) of, and movements in, share based payment share options granted during the year:

	2022 No.	2022 WAEP	2021 No.	2021 WAEP
Outstanding at the beginning of the year	45,046,214	£0.43	60,244,714	£0.42
Granted during the year	51,000,000	£0.55	4,851,500	£0.29
Cancelled during the year	(20,000,000)	£0.77	(1,250,000)	£0.12
Exercised during the year	(7,046,214)	£0.15	(4,550,000)	£0.12
Expired during the year	-	-	(14,250,000)	£0.46
Outstanding at the end of the year	69,000,000	£0.45	45,046,214	£0.43
Exercisable at the end of the year	69,000,000	£0.45	45,046,214	£0.43

The weighted average remaining contractual life of the options was 1.01 years (2021: 0.74 years).

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 16. Share Based Payments (continued)

Atlantic Lithium ESOP 2022				
Grant Date	18 August 2021	23 November 2021	22 April 2022	Total
Exercise price	£0.30-£0.50	£0.30-£0.50	£0.70-£0.80	
Life of the option	2.00	1.73	2.01	
Underlying share price	£0.2035	£0.2155	£0.5720	
Expected share price volatility	74.570%	72.731%	79.535%	
Risk free interest rate	0.150%	0.360%	1.710%	
Fair value (black-scholes) per option	£0.0342-£0.0594	£0.0309-£0.0581	£0.196-£0.217	
Number of options issued	27,000,000	3,000,000	21,000,000	51,000,000
Total value of options issued (GBP)	£1,191,567	£130,459	£4,364,000	£5,686,026
Total value of options issued (AUD equivalent)	\$2,264,480	\$241,603	\$7,732,201	\$10,238,284

Atlantic Lithium ESOP 2021			
Grant Date	9 April 2021	4 May 2021	Total
Exercise price	£0.3000	£0.3000	
Life of the option	2.00	1.00	
Underlying share price	£0.2150	£0.1980	
Expected share price volatility	71.660%	84.750%	
Risk free interest rate	0.040%	0.000%	
Fair value (black-scholes) per option	£0.0620	£0.0396	
Number of options issued	3,500,000	1,351,500	4,851,500
Total value of options issued (GBP)	£217,730	£53,578	£271,308
Total value of options issued (AUD equivalent)	\$391,496	\$96,493	\$487,989

Expected share price volatility was estimated based on historical share price volatility.

Performance rights

There were 12,150,000 performance rights granted during the year ended 30 June 2022 (2021: \$0). The performance rights entitle the holder to receive the corresponding number of ordinary shares in Atlantic Lithium based on share price performance hurdles. The performance rights vest on achievement of each Maturity price milestone and convert to fully paid ordinary shares. The Maturity price is based on a 15-trading day VWAP metric for each tranche of the performance rights. The holder of the performance rights must remain an employee of Atlantic Lithium or its subsidiaries at vesting date for the performance rights to convert into ordinary shares. However, the Board deemed Mr Mascolo's 8,100,000 Performance Rights to have all conditions for vesting met and amended expiry date to 31 December 2022 (previously 18 August 2023).

The following table illustrates the number and movements in share-based payment performance rights granted during the year:

Outstanding at the beginning of the year	12,150,000	12,150,000
Granted during the year	12,150,000	-
Cancelled during the year	(12,150,000)	-
Vested and converted during the year	-	-
Outstanding at the end of the year	12,150,000	12,150,000
Vested during the year	9,450,000	-

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 16. Share Based Payments (continued)

The following table illustrates the total value of performance rights issued during the year ended 30 June 2022:

The inputs for the valuation of the performance rights were the same as applied to the valuation of the share options issued on 18 August 2021.

	Atlantic Lithium Ltd Performance Rights			
Number of performance rights	225,000	225,000	225,000	225,000
Maturity price	£0.30	£0.35	£0.40	£0.45
Issue date	18/08/2021	18/08/2021	18/08/2021	18/08/2021
Expiry date	18/08/2023	18/08/2023	18/08/2023	18/08/2023
Fair value	£0.159	£0.142	£0.130	£0.116
Total value of performance rights issued (GBP)	£35,775	£31,950	£29,250	£26,100
Total value of performance rights issued (AUD equivalent)	\$67,988	\$60,718	\$55,587	\$49,601

	Atlantic Lithium Ltd Performance Rights			
Number of performance rights	225,000	225,000	225,000	225,000
Maturity price	£0.50	£0.55	£0.60	£0.65
Issue date	18/08/2021	18/08/2021	18/08/2021	18/08/2021
Expiry date	18/08/2023	18/08/2023	18/08/2023	18/08/2023

Fair value	£0.107	£0.097	£0.088	£0.080
Total value of performance rights issued (GBP)	£24,075	£21,825	£19,800	£18,000
Total value of performance rights issued (AUD equivalent)	\$45,753	\$41,477	\$37,628	\$34,208
Atlantic Lithium Ltd				
Performance Rights				
Number of performance rights	500,000	750,000	1,000,000	
Maturity price	£0.70	£0.75	£1.00	
Issue date	18/08/2021	18/08/2021	18/08/2021	
Expiry date	18/08/2023	18/08/2023	18/08/2023	
Fair value	£0.074	£0.067	£0.045	
Total value of performance rights issued (GBP)	£37,000	£50,250	£44,999	
Total value of performance rights issued (AUD equivalent)	\$70,316	\$95,497	\$85,518	

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 16. Share Based Payments (continued)

Atlantic Lithium Ltd				
Performance Rights				
Number of performance rights	450,000	450,000	450,000	450,000
Maturity price	£0.30	£0.35	£0.40	£0.45
Issue date	18/08/2021	18/08/2021	18/08/2021	18/08/2021
Expiry date	18/08/2023	18/08/2023	18/08/2023	18/08/2023
Amended Expiry Date	31/12/2022	31/12/2022	31/12/2022	31/12/2022
Fair value	£0.159	£0.142	£0.130	£0.116
Total value of performance rights issued (GBP)	£71,550	£63,900	£58,500	£52,200
Total value of performance rights issued (AUD equivalent)	\$135,975	\$121,437	\$111,175	\$99,202
Atlantic Lithium Ltd				
Performance Rights				
Number of performance rights	450,000	450,000	450,000	450,000
Maturity price	£0.50	£0.55	£0.60	£0.65
Issue date	18/08/2021	18/08/2021	18/08/2021	18/08/2021
Expiry date	18/08/2023	18/08/2023	18/08/2023	18/08/2023
Amended Expiry Date	31/12/2022	31/12/2022	31/12/2022	31/12/2022
Fair value	£0.107	£0.097	£0.088	£0.080
Total value of performance rights issued (GBP)	£48,151	£43,650	£39,600	£36,000
Total value of performance rights issued (AUD equivalent)	\$91,507	\$82,953	\$75,257	\$68,415
Atlantic Lithium Ltd				
Performance Rights				
Number of performance rights	1,000,000	1,500,000	2,000,000	
Maturity price	£0.70	£0.75	£1.00	
Issue date	18/08/2021	18/08/2021	18/08/2021	
Expiry date	18/08/2023	18/08/2023	18/08/2023	
Amended Expiry Date	31/12/2022	31/12/2022	31/12/2022	
Fair value	£0.074	£0.067	£0.045	
Total value of performance rights issued (GBP)	£74,000	£100,501	£89,999	
Total value of performance rights issued (AUD equivalent)	\$140,631	\$190,994	\$171,035	

The following table reconciles the movements in share based payments expense recognised in the consolidated statement of profit or loss and other comprehensive income.

	2022	2021	To be recognised in future periods
	\$	\$	\$
2019 Performance rights	2,565	606,831	
2019 Employee option modification	-	1,763	-
2020 Employee option modification	7,003		
2021 Employee options	-	391,496	
2022 Advisory Options	241,603		
2022 Performance rights	1,756,643	-	176,229
2022 Performance rights modification	15,946	-	-
2022 Employee options	9,996,682	-	-
Total share based payments expense	12,020,442	1,000,090	176,229

The weighted average remaining contractual life of the performance rights was 0.71 years (2021: 0.34 years).

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 17. Accumulated Losses

	2022	2021
	\$	\$
Accumulated losses at the beginning of the year	(47,434,660)	(42,537,119)
Losses after income tax expense	(34,647,546)	(4,897,541)
Accumulated losses attributable to members of Atlantic Lithium Limited at the end of the year	(82,082,206)	(47,434,660)

Note 18. Information relating to Atlantic Lithium Limited ("the parent entity")

	2022	2021
	\$	\$
Current assets	25,652,089	18,873,507
Total assets	36,606,321	70,210,737
Current liabilities	2,394,873	2,072,435
Total liabilities	2,438,215	2,072,435
Net Assets	34,168,106	68,138,302
Issued capital	126,468,060	102,939,352
Share based payment reserve	25,745,706	13,725,264
Financial assets revaluation reserve	511,575	301,815
Demerger Reserve	(28,794,153)	-
Accumulated losses	(89,763,081)	(48,828,129)
Loss of the parent entity	(36,259,124)	(6,356,408)
Total comprehensive loss of the parent entity	(36,049,364)	(6,054,593)

The parent does not have any guarantees in relation to the debts of its subsidiaries, contingent liabilities or contractual obligations to purchase fixed assets at 30 June 2022 (2021: nil).

Note 19. Cash Flow Reconciliation

	2022	2021
	\$	\$
Loss after income tax	(34,647,546)	(4,897,541)
Non-cash operating items		
- Exploration written off	-	1,000,280
- Write down on demerger	16,228,010	
- Depreciation	16,827	12,024
- Share based payments	12,020,442	1,000,090
- Unrealised foreign exchange losses (gains)	903,748	(573,045)
Changes in operating assets and liabilities*		
(Increase) decrease in trade and other receivables	(25,333)	8,179
(Increase) decrease in other current assets	(208,975)	(6,447)
Increase (decrease) in trade and other payables*	393,114	335,964
Change in Deferred Tax	(63,282)	319,300
Net cash flows used in operating activities	(5,382,995)	(2,801,196)
* Net of amounts relating to exploration and evaluation assets.		
Non cash investing and financing activities		
Shares issued to suppliers in lieu of cash, capitalised to exploration and evaluation assets	-	2,934,929
Share issued to suppliers for services in lieu of cash	-	82,727
Shares issued for capital raising costs in lieu of cash	-	1,235,575
Shares issued to acquire Joy Transporters Ltd, capitalised to exploration and evaluation assets	-	955,684
Acquisition of Australasian Gold Ltd shares from transfer of interest in Tenement EPM 19419	-	266,336
Demerger transaction (in-specie distribution)- refer to Note 20	28,794,153	-

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 20: Demerger

On 24th December 2021 the Group completed the demerger of Ricca Resources Limited (and accordingly the Gold Business in Ivory Coast and Chad), by way of a Capital Reduction and In-specie Distribution to Eligible Shareholders. Eligible Atlantic Lithium Limited shareholders received an in-specie distribution of 1 Ricca Resources Limited share for every 8 Atlantic Lithium Limited Shares held at the In-specie Distribution Record Date (23 November 2021). The demerger distribution is accounted for as a reduction in equity by a demerger reserve of \$28,794,153.

Fair Value amounts of assets and liabilities held for distribution to the owners were as follows

	\$
Cash and Equivalents	7,238,862
Other Current Assets	21,132
Property Plant and Equipment	54,916
Exploration and Evaluation Assets	37,910,194
Total Assets	45,225,104
Trade and Other Payables	(202,941)
Carrying value of net assets distributed	45,022,163
Write down on Demerger	(16,228,010)
Demerger Reserve	28,794,153

Note: The Fair value of net assets distributed decreased by \$7,475,828 compared to what was reported in the interim financial statements. Refer to Note 1 (y) on Key judgments – exploration & evaluation assets.

Note 21. Related Party Disclosures

(a) Subsidiaries

The consolidated financial statements include the financial statements of Atlantic Lithium Limited and the subsidiaries listed in the following table:

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 21. Related Party Disclosures (continued)

Name	Country of incorporation	Equity Interest (%)	
		2022	2021
Belinga Holdings Pty Ltd	Australia	100	100
Charger Minerals Pty Ltd	Australia	100	100
Eastern Exploration Pty Ltd	Australia	100	100
Gabon Exploration Pty Ltd	Australia	100	100
Khaleesi Resources Pty Ltd	Australia	100	100
Lithium of Africa Pty Ltd	Australia	100	100
Milingui Pty Ltd	Australia	100	100
MODA Minerals Pty Ltd	Australia	100	100
IronRidge Botswana Pty Ltd	Botswana	100	100
Khaleesi Resources SARL	Cote d'Ivoire	100	100
IronRidge Gabon SA	Gabon	100	100
Barari Developments Ltd	Ghana	90	80
Charger Minerals Ghana Limited	Ghana	100	100
Green Metals Resources Limited	Ghana	100	100
Joy Transporters Ltd	Ghana	100	100
Moda Minerals Limited	Ghana	100	100
Charger Minerals Singapore Pte Ltd	Singapore	100	100
Lithium of Africa Singapore Pte Ltd	Singapore	100	100
IronRidge Singapore Pte Ltd	Singapore	100	100
Moda Minerals Singapore Pte Ltd	Singapore	100	100
Booster Minerals Pty Ltd	Australia	0	100
Boxworx Minerals Pty Ltd	Australia	0	100
ADRI Minerals Pty Ltd	Australia	0	100

Entity	Country	2022	2021
DIVO Metals Pty Ltd	Australia	0	100
Hard Yard Metals Pty Ltd	Australia	0	100
Harrier Minerals Pty Ltd	Australia	0	100
Marlin Minerals Pty Ltd	Australia	0	100
Matilda Minerals Pty Ltd	Australia	0	100
PITA Minerals Pty Ltd	Australia	0	100
Rhodesian Resources Pty Ltd	Australia	0	100
Scope Resources Pty Ltd	Australia	0	100
Stark Metals Pty Ltd	Australia	0	100
UHITSA Minerals Pty Ltd	Australia	0	100
Booster Minerals SARL	Cote d'Ivoire	0	100
Boxworx Minerals SARL	Cote d'Ivoire	0	100
CAPRI Metals SARL	Cote d'Ivoire	0	100
DIVO Metals SARL	Cote d'Ivoire	0	100
Hard Yard Metals SARL	Cote d'Ivoire	0	100
Harrier Minerals SARL	Cote d'Ivoire	0	100
Malamute Minerals SARL	Cote d'Ivoire	0	100
Marlin Minerals SARL	Cote d'Ivoire	0	100
Matilda Minerals SARL	Cote d'Ivoire	0	100
PITA Minerals SARL	Cote d'Ivoire	0	100
Rhodesian Resources SARL	Cote d'Ivoire	0	100
Scope Resources SARL	Cote d'Ivoire	0	100
Stark Metals SARL	Cote d'Ivoire	0	100
UHITSA Minerals SARL	Cote d'Ivoire	0	100
Tekton Minerals Pte Ltd	Singapore	0	100

Subsidiaries disposed of during the year was due to the demerger of Ricca Resources (see note 20).

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 21. Related Party Disclosures (continued)

(b) Ultimate parent

Atlantic Lithium Limited is the ultimate parent, which is incorporated in Australia. There is no ultimate controlling party.

(c) Key management personnel

Details relating to key management personnel, including remuneration paid, are included in note 5.

(d) Transactions with related parties

The following table provides the total amount of transactions that were entered into with related parties for the relevant financial year:

Related party		Sales to related parties	Purchases from related parties	Other transactions with related parties
DGR Global Limited (i)	2022	-	-	-
	2021	-	192,000	-
Assore Limited (ii)	2022	-	-	120,000
	2021	-	-	120,000
Sumitomo Corporation (iii)	2022	-	-	49,450
	2021	-	-	60,000
Ricca Resources Limited (iv)	2022	-	-	94,330
	2021	-	-	-

(i) The Company had a commercial arrangement until 28th February 2021 with a major shareholder, DGR Global Limited for the provision of various services, whereby DGR Global Limited provided resources and services including the provision of its administration and exploration staff, its premises (for the purposes of conducting the Company's business operations), use of existing office furniture, equipment and certain stationery, together with general telephone, reception and other office facilities ("Services"). In consideration for the provision of the Services, the Group paid DGR Global Limited a monthly administration fee. For the year ended 30 June 2022, \$0 was paid or payable to DGR Global Limited (2021: \$192,000) for the provision of the Services. The total amount outstanding at year end for these services and other expense reimbursements was \$191,200 excl GST (2021: \$48,000).

The outstanding balances at each relevant year end are unsecured, interest free and settlement occurs in cash. All outstanding amounts payable comprise current liabilities.

(ii) The Company has a commercial arrangement with a major shareholder, Assore Limited for the services of two Non-Executive Directors. In consideration for the provision of the Services, the Group paid Assore Limited a monthly fee. For the year ended 30 June 2022, \$120,000 was paid or payable to Assore Limited (2021: \$120,000) for the provision of the Services. These fees have been included in the directors remuneration report under the individuals representing Assore Limited. The total amount outstanding at year end for these services was \$885,714 (2021: \$765,714).

The outstanding balances at each relevant year end are unsecured and interest free. All outstanding amounts payable comprise current liabilities.

(iii) The Company had a commercial arrangement with a major shareholder until 27 April 2022, Sumitomo Corporation for the services of one Non-Executive Director. In consideration for the provision of the Services, the Group paid Sumitomo Corporation a monthly fee. For the year ended 30 June 2022, \$49,450 was paid or payable to Sumitomo Corporation (2021: \$60,000) for the provision of the Services. These costs have been included in the directors remuneration report under the individual representing Sumitomo Corporation. The total amount outstanding at year end for these services was \$4,451 (2021: \$15,000).

The outstanding balances at each relevant year end are unsecured, interest free and settlement occurs in cash. All outstanding amounts payable comprise current liabilities.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 21. Related Party Disclosures (continued)

(iv) On 24th December 2021 the Group completed the demerger of Ricca Resources Limited (and accordingly the Gold Business in Ivory Coast and Chad), by way of a Capital Reduction and In-specie Distribution to Eligible Shareholders. Eligible Atlantic Lithium Limited shareholders received an in-specie distribution of 1 Ricca Resources Limited share for every 8 Atlantic Lithium Limited Shares held at the In-specie Distribution Record Date (23 November 2021). The demerger distribution is accounted for as a reduction in equity by a demerger reserve of \$28,794,153 (see note 20).

The Company recharges Ricca Resources Limited for certain services including the provision of its exploration staff, its premises (for the purposes of conducting the Company's business operations), use of IT Services, software expenses and insurances. For the year ended 30 June 2022, \$94,330 was paid or payable to Atlantic Lithium Limited (2021: nil) for the provision of these Services. The total amount outstanding at year end for these services and other expense reimbursements was \$20,607 excl GST (2021: nil). The group is owed \$152,227 by Ricca Resources Limited and its subsidiaries as at 30 June 2022 relating to loans incurred before the demerger.

The outstanding balances at each relevant year end are unsecured and interest free. All outstanding amounts receivable comprise current assets.

The Group also has a contingent liability with Ricca Resources:

1. Atlantic Lithium Limited owns 5,500,000 shares in Australasian Metals Limited (formerly Australasian Gold Limited) with a market value on 30 June 2022 of \$1,100,000 (30 June 2021: \$797,500). As part of the agreement for demerger, should Atlantic Lithium Limited decide to dispose all or any of this investment, then 50% of the consideration will be payable to Ricca Resources Limited within 10 days of the disposal.
2. Atlantic Lithium Limited has an investment of 1,000,000 in the ordinary issued capital of Auburn Resources Ltd, an unlisted public company incorporated in Australia. The valuation of \$125,000 on 30 June 2022 (30 June 2021: \$125,000) is based on the latest share capital placement on 1 July 2021. As part of the agreement for demerger, should Atlantic Lithium Limited decide to dispose all or any of this investment, then 50% of the consideration will be payable to Ricca Resources Limited within 10 days of the disposal.

Note 22. Capital Commitments

Future Exploration Commitments

The Group has certain obligations to expend minimum amounts on exploration in tenement areas. These obligations may be varied from time to time and are expected to be fulfilled in the normal course of operations of the Group. The commitments are as follows:

	2022	2021
	\$	\$
Less than 12 months	3,447,376	8,085,956
Between 12 months and 5 years	2,755,257	7,367,663
	6,202,633	15,453,619

To keep tenements in good standing, work programs should meet certain minimum expenditure requirements. If the minimum expenditure requirements are not met, the Group has the option to negotiate new terms or relinquish the tenements. The Group also has the ability to meet expenditure requirements by joint venture or farm-in agreements.

Piedmont funding

On 31 August Piedmont Inc executed a binding agreement with Piedmont Lithium Inc to fund development of the Ewoyaa Project in Ghana for US\$102,000,000 as follows

- Piedmont Lithium investment of US\$15,000,000 for ordinary shares in the Company
- Piedmont Lithium Inc to earn up to an initial 22.5% of CCLP at completion of funding comprising:
 - USD\$5,000,000 towards an accelerated regional exploration programme to enhance the current Ewoyaa resource; and
 - US\$12,000,000 towards completing the Definitive Feasibility Studies for the Project
- Piedmont Inc to earn a further 27.5% of CCLP via the funding of Capex of US\$70,000,000m for the Ewoyaa Project

As at 30 June 2022 Piedmont outstanding commitment to the Group was US70,000,000 for capex and US4,389,829 for Regional Exploration and DFS Funding.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 23. Financial Risk Management

(a) General objectives, policies and processes

In common with all other businesses, the Group is exposed to risks that arise from its use of financial instruments. This note describes the Group's objectives, policies and processes for managing those risks and the methods used to measure them. Further quantitative information in respect of these risks is presented throughout these financial statements.

There have been no substantive changes in the Group's exposure to financial instrument risks, its objectives, policies and processes for managing those risks or the methods used to measure them from previous years unless otherwise stated in this note.

The Group's financial instruments consist mainly of deposits with banks, receivables and payables.

The Board has overall responsibility for the determination of the Group's risk management objectives and policies and, whilst retaining ultimate responsibility for them, it has delegated the authority for designing and operating processes that ensure the effective implementation of the objectives and policies to the Group's finance function. The Group's risk management policies and objectives are therefore designed to minimise the potential impacts of these risks on the results of the Group where such impacts may be material.

The overall objective of the Board is to set policies that seek to reduce risk as far as possible without unduly affecting the Group's competitiveness and flexibility. Further details regarding these policies are set out below:

(b) Credit Risk

Credit risk is the risk that the other party to a financial instrument will fail to discharge their obligation resulting in the Group incurring a financial loss. This usually occurs when debtors fail to settle their obligations owing to the Group. The Group's objective is to minimise the risk of loss from credit risk exposure.

The maximum exposure to credit risk, excluding the value of any collateral or other security, at reporting date to recognised financial assets, is the carrying amount, net of any provisions for impairment of those assets, as disclosed in the statement of financial position and notes to the financial statements.

Credit risk is reviewed regularly by the Board. It arises from exposure to receivables as well as through deposits with financial institutions.

The Group does not have any material credit risk exposure to any single debtor or group of debtors under financial instruments entered into by the Group and at reporting date. Bank deposits with Westpac Banking Corporation Limited, Ecobank Cote d'Ivoire, Standard Chartered Bank Ghana and Société Generale Ghana

(c) Liquidity Risk

Liquidity risk is the risk that the Group may encounter difficulties raising funds to meet financial obligations as they fall due. The objective of managing liquidity risk is to ensure, as far as possible, that the Group will always have sufficient liquidity to meet its liabilities when they fall due, under both normal and stressed conditions.

Liquidity risk is reviewed regularly by the Board.

The Group manages liquidity risk by monitoring forecast cash flows and liquidity ratios such as working capital. The Group did not have any financing facilities available at reporting date.

(d) Market Risk

Market risk arises from the use of interest bearing, tradable and foreign currency financial instruments. It is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in interest rates (interest rate risk), foreign exchange rates (currency risk) or other market factors (other price risk). The Group does not have any material exposure to market risk other than interest rate risk and foreign currency risk.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 23. Financial Risk Management (continued)

Interest rate risk

Interest rate risk arises principally from cash and cash equivalents. The objective of interest rate risk management is to manage and control interest rate risk exposures within acceptable parameters while optimising the return.

Foreign currency risk

The Consolidated entity undertakes certain transactions denominated in foreign currency and is exposed to foreign currency risk through foreign exchange rate fluctuations. Foreign exchange risk arises from future commercial transactions and recognised financial assets and financial liabilities denominated in a currency that is not the entity's functional currency. In order to protect against adverse exchange rate movements, the Consolidated entity has set up foreign bank accounts in USD, GBP, Euro and GHS which are used to fund its exploration activities in Ghana.

The carrying amount of the Consolidated entity's foreign currency denominated financial assets at the reporting date were as follows, expressed in AUD

	Assets		Liabilities	
	2022	2021	2022	2022
	\$	\$	\$	\$
US Dollars	2,546,652	126,884	1,421,637	248,037
Ghanian Cedi	28,046,628	15,126,135	35,635,020	16,838,305
West African Cedi	70,091	20,401,817	92,190	21,409,419
Euro	-	6,549,361	-	10,478,321

Total	30,663,371	42,204,197	37,148,847	48,974,082
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A sensitivity analysis of the movement in exchange rate (based on the closing balance of the asset) is presented below:

Consolidated 2022	AUD strengthen by 1% Impact on		AUD weaken by 1% Impact on	
	Profit before tax	Equity	Profit before tax	Equity
US Dollar Assets	897	24,569	(897)	(24,569)
US Dollar Liabilities	(22)	(14,195)	22	14,195
Ghanian Cedi Assets	5,488	274,979	(5,488)	(274,979)
Ghanian Cedi Liabilities	(17,974)	(338,376)	17,974	338,376
West African Assets	21	680	(21)	(680)
West African Liabilities	-	(922)	-	922
Euro Assets	-	-	-	-
Euro Liabilities	-	-	-	-
	(11,590)	(53,265)	11,590	53,265

Consolidated 2021	AUD strengthen by 1% Impact on		AUD weaken by 1% Impact on	
	Profit before tax	Equity	Profit before tax	Equity
US Dollar Assets	857	411	(857)	(411)
US Dollar Liabilities	(3)	(2,475)	3	2,475
Ghanian Cedi Assets	726	150,536	(726)	(150,536)
Ghanian Cedi Liabilities	(17,234)	(151,149)	17,234	151,149
West African Assets	1,786	202,233	(1,786)	(202,233)
West African Liabilities	(1,044)	(213,050)	1,044	213,050
Euro Assets	1,867	63,627	(1,867)	(63,627)
Euro Liabilities	(145)	(104,638)	145	104,638
	(13,191)	(54,505)	13,191	54,505

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 23. Financial Risk Management (continued)

Interest rate risk is managed with a mixture of fixed and floating rate financial instruments. For further details on interest rate risk refer to the tables below:

	Floating interest rate	Fixed interest rate	Non-interest bearing	Total carrying amount	Weighted average effective interest rate
	2022	2022	2022	2022	2022
	\$	\$	\$	\$	%
(i) Financial assets					
Cash and cash equivalents	23,881,650	-	-	23,881,650	0.00%
Trade and other receivables	-	-	2,304,858	2,304,858	-
Other financial assets	-	-	1,232,520	1,232,520	-
Total financial assets	23,881,650	-	3,537,378	27,419,028	
(ii) Financial liabilities					
Trade and other payables	-	-	4,310,095	4,310,095	-
Total financial liabilities	-	-	4,310,095	4,310,095	-

	Floating interest rate	Fixed interest rate	Non-interest bearing	Total carrying amount	Weighted average effective interest rate
	2021	2021	2021	2021	2021
	\$	\$	\$	\$	%
(i) Financial assets					
Cash and cash equivalents	19,135,463	-	-	19,135,463	0.00%
Trade and other receivables	-	-	70,081	70,081	-
Other financial assets	-	-	936,500	936,500	-
Total financial assets	19,135,463	-	1,006,581	20,142,044	
(ii) Financial liabilities					
Trade and other payables	-	-	3,953,793	3,953,793	-
Total financial liabilities	-	-	3,953,793	3,953,793	-

The table below demonstrates the sensitivity to a reasonably possible change in the United States dollar and the British pound sterling against the Australian dollar.

	Change in US dollar rate	Effect on Equity
		\$
2022	+10%	437,120
	-5%	-218,560
2021	+10%	91,966
	-5%	-45,893

	Change in British sterling pound rate	Effect on Equity
		\$
2022	+10%	1,915,215
	-5%	-957,608
2021	+10%	1,752,252
	-5%	-876,126

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

For the year ended 30 June 2022

Note 23. Operating Segments

The Group has identified its operating segment based on the internal reports that are reviewed and used by the Board of Directors (chief operating decision maker) in assessing performance and determining the allocation of resources. The Group is managed primarily on a geographic basis, that is, the location of the respective areas of interest (tenements) in Australia and Africa. Operating segments are determined on the basis of financial information reported to the Board for the Group as a whole. The Group does not yet have any products or services from which it derives an income.

Accordingly, management currently identifies the Group as having only one reportable segment, being exploration for base and precious metals. The financial results from this segment are equivalent to the financial statements of the Group. There have been no changes in the operating segments during the year.

Geographical information

	Geographical – non-current assets	
	2022	2021
	\$	\$
Australia	1,258,883	1,194,389
Ivory Coast	68,370	20,223,263
Ghana	11,164,758	16,207,375
Chad	-	15,096,189
	12,492,011	52,721,216

Note 24. Contingent Liabilities

Refer to Note 21 of the Group contingent liability with Ricca Resources

1. The Group owns 5,500,000 shares in Australasian Metals Limited with a market value on 30 June 2022 of \$1,100,000 (30 June 2021: \$797,500). Should the Group decide to dispose all or any of this investment, then 50% of the consideration will be payable to Ricca Resources Limited within 10 days of the disposal.
2. The Group has an investment of 1,000,000 in the ordinary issued capital of Auburn Resources Ltd, an unlisted public company incorporated in Australia. The valuation of \$125,000 on 30 June 2022 (30 June 2021: \$125,000) is based on share capital placement on 1 July 2021. Should the Group decide to dispose all or any of this investment, then 50% of the consideration will be payable to Ricca Resources Limited within 10 days of the disposal.

The Directors are not aware of any other contingent assets or contingent liabilities at the date of this report.

Note 25: Fair Value Measurement

The Exploration and Evaluation assets on demerger at fair value were based on a valuation performed by an independent consultant and adjusted by management based on further technical analysis.

Fair value hierarchy

The following tables detail the consolidated entity's financial assets and liabilities, measured or disclosed at fair value, using a three level hierarchy, based on the lowest level of input that is significant to the entire fair value measurement, being:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly

Level 3: Unobservable inputs for the asset or liability

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)
For the year ended 30 June 2022

Note 25: Fair Value Measurement (continued)

	Level 1	Level 2	Level 3	Total
	\$	\$	\$	\$
Consolidated -30 June 2022				
Financial assets at fair value through other comprehensive income	1,100,020	-	125,000	1,225,020
Total Assets	1,100,020	-	125,000	1,225,020
Consolidated -30 June 2021				
Financial assets at fair value through other comprehensive income	801,500	-	125,000	926,500
Total Assets	801,500	-	125,000	926,500

Note 26. Subsequent Events

On 19 July and 2 August 2022, the Group reported additional assay results from the ongoing resource and exploration drilling programme at the Ewoyaa Lithium Project in Ghana, West Africa. Approximately 27,000m of the planned 37,000m drilling programme was completed to date with the remainder planned for completion in Q3 2022.

On 28 July 2022, 750,000 fully paid ordinary shares were issued following the exercise of unlisted director options at £0.12.

On 11 August 2022, 9,450,000 ordinary shares of no par value each in the Company were issued as a result of the exercise of vested unlisted performance rights (granted on 17 August 2021) for nil consideration. Of the total allotment, Lennard Koiff van Oosterwijk, Interim CEO and Director of the Company, acquired 1,350,000 new Ordinary Shares as a result of exercise of vested unlisted performance rights for nil consideration. The remaining allotment and issue of 8,100,000 ordinary shares of no par value each in the Company were as a result of the exercise of vested unlisted performance rights

On 31 August 2022, 2,250,000 12p unlisted options held by directors and former directors, lapsed and were not exercised.

On 19 September 2022, the Group advised of the allotment and issue of 15,500,000 new ordinary shares in the Company as a result of the exercise of unlisted options for a total consideration of £2,580,000 (A\$4,469,534).

On 22 September the Group announced the completion of the Pre-Feasibility Study ("PFS") on the Ewoyaa Lithium Project in Ghana, West Africa.

On 26 September 2022 the Group was admitted to the Australian Stock Exchange ("ASX") and in the process issued 22,850,000 shares at \$0.58 each.

On 13 October 2022 the Group submitted a Mining Licence application in respect to the extraction of minerals from the proposed Ewoyaa Lithium Mine to the Minerals Commission of Ghana in West Africa.

On 28 November 2022 the Group announced Keith Muller as Chief Operating Officer and was allotted as part of his employment contract 2,000,000 60p unlisted options and 2,000,000 70p unlisted options, expiring two years from issue.

On 13 December 2022 the Group announced the award of the processing plant Front-End Engineering Design contract for the Ewoyaa Lithium Project in Ghana, West Africa to Primero Group.

On 01 February 2023 the Group announced a significant Mineral Resource Estimate upgrade to 35.3Mt at 1.25% Li2O for the Ewoyaa lithium deposit within the Cape Coast Lithium Portfolio in Ghana, West Africa.

**SAYONA MINING LIMITED
AND CONTROLLED ENTITIES**

ABN 26 091 951 978

**FINANCIAL REPORT
FOR THE YEAR ENDED
30 JUNE 2022**

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
ABN 26 091 951 978

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE YEAR ENDED 30 JUNE 2022

	Note	Consolidated Group	
		2022	2021
		\$	\$
Revenue	2(a)	498,218	645,387
Other income	2(b)	108,374,739	0
Administration and Corporate expenses		(9,548,843)	(3,003,696)
Capitalised exploration expenditure written-off		-	(81,708)
Employee benefit expense		(10,517,341)	(1,884,058)
Foreign exchange losses	3(ii)	(2,108,773)	-
Occupancy costs		(680,878)	-
Depreciation and amortisation expense	3(i)	(50,069)	(51,758)
Transaction cost on project acquisition	3(ii)	(1,352,809)	-
Finance Costs	3(i)	(928,072)	(3,665)
Profit/(Loss) before income tax		83,686,172	(4,379,498)
Tax expense	4	-	-
Profit/(Loss) for the year		83,686,172	(4,379,498)
Other comprehensive income			
Items that will be reclassified subsequently to profit or loss when specific conditions are met:			
Exchange differences on translating foreign operations	4(c)	14,105,312	(18,639)
Items that will not be reclassified subsequently to profit or loss		-	-
Other comprehensive income/(loss) for the year		14,105,312	(18,639)
Total comprehensive income/(loss) for the year		97,791,484	(4,398,137)
Total comprehensive income/(loss) attributable to:			
- members of the company		58,894,895	(4,379,498)
- non-controlling interest		24,791,277	-
		83,686,172	(4,379,498)
Earnings per share from continuing operations:			
Basic earnings per share (cents per share)	7	1.23	(0.13)
Diluted earnings per share (cents per share)	7	1.16	-

The accompanying notes form part of these financial statements.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
ABN 26 091 951 978

STATEMENT OF FINANCIAL POSITION
AS AT 30 JUNE 2022

	Note	Consolidated Group	
		2022	2021
		\$	\$
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	9	184,559,499	35,502,596
Trade and other receivables	10	9,680,669	10,412,500
Other assets	11	13,700,194	43,648
Total Current Assets		207,940,362	45,958,744
NON-CURRENT ASSETS			
Mine Properties	12	61,783,059	-
Property, plant and equipment	13	232,381,790	162,222
Exploration and evaluation asset	14	158,861,990	25,552,728
Intangible assets	15	184,875	-
Right of use asset	16	9,529	47,629
Total Non-Current Assets		453,221,243	25,762,579
TOTAL ASSETS		661,161,605	71,721,323
LIABILITIES			
CURRENT LIABILITIES			
Trade and other payables	17	6,921,952	3,665,560
Lease Liability	16	10,240	37,540
Provisions	18	323,787	116,872
Total Current Liabilities		7,255,979	3,819,972
NON CURRENT LIABILITIES			
Lease Liability	16	-	15,224
Other financial liabilities	20	11,503,791	-
Other liabilities	21	17,058,804	-
Provisions	18	31,085,639	-
Interest bearing borrowings	19	23,461,533	-
Total Non Current Liabilities		83,109,767	15,224
TOTAL LIABILITIES		90,365,746	3,835,196
NET ASSETS		570,795,859	67,886,127
EQUITY			
Issued capital	22	504,254,583	128,727,789
Reserves	23	14,385,595	304,633
Accumulated losses		(7,360,822)	(67,643,223)
Non-controlling Interests		59,516,503	6,496,928
TOTAL EQUITY		570,795,859	67,886,127

The accompanying notes form part of these financial statements.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
ABN 26 091 951 978

STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 30 JUNE 2022

Consolidated Group	Share Capital	Accumulated Losses	Foreign Currency Translation Reserve	Option Reserve	Non- Controlling Interests	Total
	\$	\$	\$	\$	\$	\$
Balance at 30 June 2020	84,930,181	(64,112,907)	214,319	114,135	-	21,145,728
Loss attributable to members of the entity	-	(4,379,498)	-	-	-	(4,379,498)
Other comprehensive income for the year	-	-	(18,639)	-	-	(18,639)
Total comprehensive income for the year	-	(4,379,498)	(18,639)	-	-	(4,398,137)
Transactions with owners in their capacity as owners						
Shares issued during the year	22 47,008,233	-	-	-	-	47,008,233
Transaction costs	(3,210,625)	-	-	-	-	(3,210,625)
Share based payments	29 -	-	-	844,000	-	844,000
Reserve transferred to retained earnings	-	849,182	-	(849,182)	-	-
Recognition of non-controlling interests	33 -	-	-	-	6,496,928	6,496,928
Total transactions with owners	<u>43,797,608</u>	<u>849,182</u>	<u>-</u>	<u>(5,182)</u>	<u>6,496,928</u>	<u>51,138,536</u>
Balance at 30 June 2021	<u>128,727,789</u>	<u>(67,643,223)</u>	<u>195,680</u>	<u>108,953</u>	<u>6,496,928</u>	<u>67,886,127</u>
Profit/attributable to members of the entity	-	58,894,895	-	-	24,791,277	83,686,172
Other comprehensive income for the year	-	-	12,428,088	-	1,677,224	14,105,312
Total comprehensive income for the year	-	58,894,895	12,428,088	-	26,468,501	97,791,484
Transactions with owners in their capacity as owners						
Shares issued during the year	22 392,474,768	-	-	-	26,551,074	419,025,842
Transaction costs	(16,947,974)	-	-	-	-	(16,947,974)
Share based payments	29 -	-	-	3,040,380	-	3,040,380
Reserve transferred to retained earnings	-	1,387,506	-	(1,387,506)	-	-
Total transactions with owners	<u>375,526,794</u>	<u>1,387,506</u>	<u>-</u>	<u>1,652,874</u>	<u>26,551,074</u>	<u>405,118,248</u>
Balance at 30 June 2022	<u>504,254,583</u>	<u>(7,360,822)</u>	<u>12,623,768</u>	<u>1,761,827</u>	<u>59,516,503</u>	<u>570,795,859</u>

The accompanying notes form part of these financial statements.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
ABN 26 091 951 978

STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 30 JUNE 2022

	Note	Consolidated Group	
		2022	2021
		\$	\$
CASH FLOWS FROM OPERATING ACTIVITIES			
Payments to suppliers and employees		(20,950,781)	(10,732,844)
Government subsidies		42,133	315,190
Interest received		110,638	2,252
Other income		345,447	17,584
Interest and other costs of finance paid		(1,430)	(3,665)
Finance costs		-	(773,636)
Net cash provided by (used in) operating activities	24	(20,453,993)	(11,175,119)
CASH FLOWS FROM INVESTING ACTIVITIES			
Payment for subsidiary, net of cash acquired	5(A)	(105,264,361)	-
Payment for Moblan tenements	5(B)	(116,661,862)	-
Capitalised exploration expenditure	14	(10,160,134)	(4,272,756)
Purchase of property, plant and equipment	13	(21,864,633)	(31,758)
Net receipt of royalty advances	5(B)	8,619,784	-
Deposits for rehabilitation provisions		(10,503,432)	-
Net cash provided by (used in) investing activities		(255,834,638)	(4,304,514)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issue of shares	22	423,876,147	46,491,520
Costs associated with share and option issues		(15,577,814)	(2,167,693)
Proceeds from minority interest investment in subsidiary		16,510,768	6,496,928
Proceeds from convertible note facility		-	8,044,030
Repayment of convertible notes		-	(8,044,030)
Repayment of lease liabilities		(42,524)	(36,334)
Net cash provided by (used in) financing activities		424,766,577	50,784,421
Net increase (decrease) in cash held		148,477,946	35,304,788
Cash at beginning of financial year		35,502,596	492,660
Effect of exchange rates on cash holdings in foreign currencies		578,957	(294,852)
Cash at end of financial year	9	184,559,499	35,502,596

The accompanying notes form part of these financial statements.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES

ABN 26 091 951 978

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

These consolidated financial statements and notes represent those of Sayona Mining Limited ("the Company") and Controlled Entities (the "Consolidated Group" or "Group").

The separate financial statements of the parent entity, Sayona Mining Limited, have been presented within this financial report as permitted by the Corporations Act 2001.

The financial statements have been authorised for issue as at the date of the Directors' Declaration.

Basis of Preparation

These general purpose financial statements have been prepared in accordance with the Corporations Act 2001, Australian Accounting Standards and Interpretations of the Australian Accounting Standards Board and International Financial Reporting Standards as issued by the International Accounting Standards Board. The Group is a for-profit entity for financial reporting purposes under Australian Accounting Standards. Material accounting policies adopted in the preparation of these financial statements are presented below and have been consistently applied unless stated otherwise.

Except for cash flow information, the financial statements have been prepared on an accruals basis and are based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities.

Continued Operations and Future Funding

The financial statements have been prepared on a going concern basis which contemplates that the Group will continue to meet its commitments and can therefore continue normal business activities and the realisation of assets and settlement of liabilities in the ordinary course of business.

At 30 June 2022 total assets of the Group were A\$661,161,605 including cash balances of A\$184,559,499, property, plant & equipment of A\$232,381,790, together with mine and exploration assets of A\$220,645,049.

The Group's focus over the next 12 months is the restart of spodumene concentrate production at NAL from the first quarter 2023, together with an evaluation of downstream processing potential.

In addition, the Group intends upgrading the mineral resource at its Moblan project and completing a feasibility study on project development. An evaluation of downstream processing options will also be undertaken.

Because of the nature of the Group's proposed operations and expansion strategies into downstream processing, additional funding will be required in the future to fund this and other activities. Accordingly, when necessary, the Group investigates various options for raising additional funds which may include but is not limited to an issue of shares, borrowings, a farm-out of an interest in one or more exploration tenements or the sale of exploration assets where increased value has been created through previous exploration activity.

Principles of Consolidation

The consolidated financial statements incorporate all of the assets, liabilities and results of the parent (Sayona Mining Limited) and all of the subsidiaries. Subsidiaries are entities the parent controls. The parent controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. A list of the subsidiaries is provided in Note 33.

The assets, liabilities and results of all subsidiaries are fully consolidated into the financial statements of the Group from the date on which control is obtained by the Group. The consolidation of a subsidiary is discontinued from the date that control ceases. Intercompany transactions, balances and unrealised gains or losses on transactions between group entities are fully eliminated on consolidation. Accounting policies of subsidiaries have been changed and adjustments made where necessary to ensure uniformity of the accounting policies adopted by the Group.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
ABN 26 091 951 978
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Business Combinations

Business combinations occur where an acquirer obtains control over one or more businesses.

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control. The business combination will be accounted for from the date that control is obtained, whereby the fair value of the identifiable assets acquired and liabilities (including contingent liabilities) assumed is recognised (subject to certain limitations).

Where measuring consideration transferred in the business combination, any assets or liability resulting from a contingent consideration arrangement is also included. Subject to initial recognition, contingent consideration classified as equity is not remeasured and its subsequent settlement is accounted for within equity. Contingent consideration classified as an assets or liability is remeasured in each reporting period to fair value, recognising any change to fair value in profit and loss, unless the change in value can be identified as existing at acquisition date.

All transaction costs incurred in relation to business combinations, other than those associated with the issue of a financial instrument, are recognised as expenses in profit or loss as incurred.

The acquisition of a business may result in the recognition of goodwill or a gain from a bargain purchase.

Equity interests in a subsidiary not attributable, directly or indirectly, to the Group are presented as “non-controlling interests”. The Group initially recognises non-controlling interests that are present ownership interests in subsidiaries and are entitled to a proportionate share of the subsidiary’s net assets on liquidation at either fair value or the non-controlling interests’ proportionate share of the subsidiary’s net assets. Subsequent to initial recognition, non-controlling interests are attributed their share of profit or loss and each component of other comprehensive income. Non-controlling interests are shown separately within the equity section of the statement of financial position and statement of comprehensive income.

Income Tax

The income tax expense/(income) for the year comprises current income tax expense/(income) and deferred tax expense/(income).

Current income tax expense charged to profit or loss is the tax payable on taxable income. Current tax liabilities/(assets) are measured at the amounts expected to be paid to/(recovered from) the relevant taxation authority.

Deferred income tax expense reflects movements in deferred tax asset and deferred tax liability balances during the year as well as unused tax losses.

Current and deferred income tax expense/(income) is charged or credited outside profit or loss when the tax relates to items that are recognised outside profit or loss.

Deferred tax assets and liabilities are calculated at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled and their measurement also reflects the manner in which management expects to recover or settle the carrying amount of the related asset or liability.

Deferred tax assets relating to temporary differences and unused tax losses are recognised only to the extent that it is probable that future taxable profit will be available against which the benefits of the deferred tax asset can be utilised.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Where temporary differences exist in relation to investments in subsidiaries, deferred tax assets and liabilities are not recognised where the timing of the reversal of the temporary difference can be controlled and it is not probable that the reversal will occur in the foreseeable future.

Current tax assets and liabilities are offset where a legally enforceable right of set-off exists, and it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liability will occur.

Deferred tax assets and liabilities are offset where a legally enforceable right of set-off exists, the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liability will occur in future periods in which significant amounts of deferred tax assets or liabilities are expected to be recovered or settled.

Tax consolidation

The company and its wholly-owned Australian resident entities have formed a tax consolidated group and are therefore taxed as a single entity from that date. The head entity within the tax consolidated group is Sayona Mining Limited. The members of the tax-consolidated group are identified in Note 33. Tax expense/income, deferred tax liabilities and deferred tax assets arising from temporary differences of the members of the tax consolidated group are recognised in the separate financial statements of the members of the tax-consolidated group using the "separate taxpayer within group" approach by reference to the carrying amounts in the separate financial statements of each entity and the tax values applying under tax consolidation. Current tax liabilities and assets and deferred tax assets arising from unused tax losses and relevant tax credits of the members of the tax-consolidated group are recognised by the Company (as head entity in the tax consolidated group). Tax funding arrangements are currently in place between entities in the tax-consolidated group.

Property, Plant and Equipment

Each class of property, plant and equipment is carried at cost or fair value as indicated less, where applicable, any accumulated depreciation and impairment losses.

Plant and equipment are measured on the cost basis and therefore carried at cost less accumulated depreciation and any accumulated impairment. In the event the carrying amount of plant and equipment is greater than the estimated recoverable amount, the carrying amount is written down immediately to the estimated recoverable amount and impairment losses are recognised in profit or loss. A formal assessment of the recoverable amount is made when impairment indicators are present.

The carrying amount of plant and equipment is reviewed annually by directors to ensure it is not in excess of the recoverable amount from these assets. The recoverable amount is assessed on the basis of the expected net cash flows that will be received from the asset's employment and subsequent disposal. The expected net cash flows have been discounted to their present values in determining recoverable amounts.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that the future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are recognised as expenses in profit or loss during the financial period in which they are incurred.

Construction Work in Progress are measured on the cost basis and represent complete assets or partial assets/components that will be part of the refurbishment works to modernise the plant to be a world class lithium processing plant. These costs will form part of the plant and equipment costs once the refurbishment works are completed and the plant is then fully operational.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES

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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Property

Freehold land and buildings are carried at their fair value (being the amount for which an assets could be exchanged between knowledgeable, willing parties in an arm's length transaction), based on periodic, but at least triennial, valuations by external independent valuers, less accumulated impairment losses and accumulated depreciation for buildings.

Increases in carrying amount arising on revaluation of land and buildings are credited to a revaluation surplus in equity. Decreases that offset previous increases in the same asset are recognised against revaluation surplus directly in equity. All other decreased are recognised in the profit or loss.

Any accumulated depreciation at the date of revaluation is eliminated against the gross carrying amount of the asset.

Depreciation

The depreciable amount of all fixed assets is depreciated on a straight-line basis over their useful lives to the consolidated Group commencing from the time the asset is held ready for use. Leasehold improvements are depreciated over the shorter of either the unexpired period of the lease or the estimated useful lives of the improvements. The depreciation rates used for plant and equipment are in the range between 4% and 40%.

The depreciable amount of buildings, excluding freehold land, is depreciable on a straight line basis over the asset's useful life to the Consolidated Group commencing from the time the asset is held ready for use. The rate of depreciation applicable to buildings is 2.5%.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are recognised in profit or loss in the period in which they arise.

Exploration and Development Expenditure

Exploration, evaluation and development expenditures incurred are capitalised in respect of each identifiable area of interest. These costs are only capitalised, where the Group has right of tenure, to the extent that they are expected to be recovered through the successful development of the area or where activities in the area have not yet reached a stage that permits reasonable assessment of the existence of economically recoverable reserves.

Accumulated costs in relation to an abandoned area are written off in full against profit or loss in the year in which the decision to abandon the area is made. A regular review is undertaken of each area of interest to determine the appropriateness of continuing to capitalise costs in relation to that area of interest.

The term "Joint Operation" has been used to describe "farm-in" and "farm-out" arrangements.

Where the Group has entered into joint operation agreements on its areas of interest, the earn-in contribution by the joint operation partner is offset against expenditure incurred. Earn-in contributions paid, or expenditure commitments incurred by the Company to acquire a joint venture interest are expensed when incurred up to the time an interest is acquired.

Intangible Assets

Computer software is recorded at cost. Where software is acquired at no cost, or at nominal cost, the cost is its fair value as at the date of acquisition. It has a finite life and is carried at cost less accumulated amortisation and any impairment losses. Software has an estimated useful life of between one and three years. It is assessed annually for impairment.

Interests in Joint Arrangements

Joint arrangements represent the contractual sharing of control between two or more parties in a business venture where decisions about the relevant activities of the arrangement (those that significantly affect the companies' returns) require the unanimous consent of the parties sharing control.

Separate joint venture entities providing the joint venturers with an interest to the net asset as classified as a joint venture and accounting for using the equity method.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES

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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Joint operations represent arrangements in which the joint operators maintain direct interests in each asset, and obligations for the liabilities, relating to the arrangement. The Group's interest in the assets and liabilities, revenue and expenses of joint operations are included in the respective line items of consolidation financial statements.

Gains and losses resulting from sales to joint operation are recognised to the extent of the other parties' interests.

When the Group makes purchases from a joint operation, it does not recognise its share of the gains and losses from the joint arrangement until it resells the goods/assets to a third party.

Restoration Costs

Costs of site restoration are provided for over the life of the project from when exploration commences and are included in the costs of that stage. Site restoration costs include the dismantling and removal of mining plant, equipment and building structures, waste removal, and rehabilitation of the site in accordance with local laws and regulations and clauses of the permits. Such costs have been determined using estimates of future costs, current legal requirements and technology on an undiscounted basis.

Any changes in the estimates for the costs are accounted for on a prospective basis. In determining the costs of site restoration, there is uncertainty regarding the nature and extent of the restoration due to community expectations and future legislation. Accordingly, the costs have been determined on the basis that the restoration will be completed within one year of abandoning the site.

Provision is made for close-down, restoration and environmental costs when the obligation occurs, based on the net present value of estimated future costs required to satisfy the obligation. Management uses its judgment and experience to determine the potential scope of closure rehabilitation work required to meet the Group's legal, statutory and constructive obligations, and any other commitments made to stakeholders, and the options and techniques available to meet those obligations and estimate the associated costs and the likely timing of those costs.

Mine Properties

Mines under construction

Mine properties under construction comprises exploration and evaluation expenditure once the work completed to date supports the future development of the property and such development receives appropriate approvals.

All subsequent expenditure on the construction, installation or completion of infrastructure facilities is capitalised in 'Mines under construction'. Development expenditure is net of proceeds from the sale of ore extracted during the development phase to the extent that it is considered integral to the development of the mine. Any costs incurred in testing the assets to determine if they are functioning as intended, are capitalised, net of any proceeds received from selling any product produced while testing. Where these proceeds exceed the cost of testing, any excess is recognised in the statement of profit or loss and other comprehensive income. After production starts, all assets included in 'Mines under construction' are then transferred to 'Producing mines' which is also a sub-category of 'Mine properties'.

Mine Properties and Mineral Deposits

Estimates of ore reserves and, in some cases, mineral resources can impact depreciation and amortisation rates; the carrying values of intangible assets and property, plant and equipment; provisions for close-down and restoration costs; and the recovery of deferred tax assets. The Group estimates its ore reserves and mineral resources based on information compiled by Competent Persons as defined in accordance with the Joint Ore Reserves Committee (JORC) code.

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Estimation requires assumptions about future commodity prices and demand, exchange rates, production costs, transport costs, close-down and restoration costs, recovery rates and discount rates and, in some instances, the renewal of mining licences. There are many uncertainties in the estimation process and assumptions that are valid at the time of estimation may change significantly when new information becomes available. New geological or economic data, or unforeseen operational issues, may change estimates of ore reserves and mineral resources. The Group uses judgment as to when to include mineral resources in accounting estimates, for example, the use of mineral resources in the Group's depreciation policy is described in Note 1 above and in the determination of the date of closure as described in Note 1.

Leases

At inception of a contract, the Group assesses if the contract contains or is a lease. If there is a lease present, a right-of-use asset and a corresponding lease liability is recognised by the Group where the Group is a lessee. However, all contracts that are classified as short-term leases (leases with remaining lease term of 12 months or less) and leases of low value assets are recognised as an operating expense on a straight-line basis over the term of the lease.

Initially the lease liability is measured at the present value of the lease payments still to be paid at commencement date. The lease payments are discounted at the interest rate implicit in the lease. If this rate cannot be readily determined, the Group uses the incremental borrowing rate.

Lease payments included in the measurement of the lease liability are as follows:

- fixed lease payments less any lease incentives;
- variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- the amount expected to be payable by the lessee under residual value guarantees;
- the exercise price of purchase options, if the lessee is reasonably certain to exercise the options;
- lease payments under extension options if the lessee is reasonably certain to exercise the options; and
- payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The right-of-use assets comprise the initial measurement of the corresponding lease liability as mentioned above, any lease payments made at or before the commencement date as well as any initial direct costs. The subsequent measurement of the right-of-use assets is at cost less accumulated depreciation and impairment losses.

Right-of-use assets are depreciated over the lease term or useful life of the underlying asset whichever is the shortest.

Where a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group anticipates to exercise a purchase option, the specific asset is depreciated over the useful life of the underlying asset.

Impairment of Assets

At the end of each reporting period, the Group assesses whether there is any indication that an asset may be impaired. The assessment will include consideration of external and internal sources of information. If such an indication exists, the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, is compared to the asset's carrying value. Any excess of the asset's carrying value over its recoverable amount is recognised immediately in profit or loss.

Where it is not possible to estimate the recoverable amount of an individual asset the Group estimates the recoverable amount of the cash generating unit to which the asset belongs.

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Reporting by operating segments

An internally determined transfer price is set for all intersegment sales. This price is reset quarterly and is based on what would be realised in the event the sale was made to an external party at arm's length. All such transactions are eliminated on consolidation of the Group's financial statements.

Corporate charges are allocated to reporting segments based on the segments' overall proportion of revenue generation with the Group. The Board of Directors that is representative of likely consumption of head office expenditure that should be used in assessing segment performance and cost recoveries.

Segment Assets

Where an asset is used across multiple segments, the asset is allocated to the segment that receives the majority of the economic value from the asset. In most instances, segment assets are clearly identifiable on the basis of their nature and physical location.

Segment Liabilities

Liabilities are allocated to segments where there is a direct nexus between the incurrence of the liability and the operations of the segment. Borrowings and tax liabilities are generally considered to relate to the Group as a whole and are not allocated. Segment liabilities include trade and other payable and certain direct borrowings.

All Other Segments

The following items of revenue, expenses, assets and liabilities are not allocated to operating segments as they are not considered part of the core operations of any segment:

- derivatives
- net gains on disposal of available-for-sale investments
- impairment of assets and other non-recurring items of revenue or expense
- income tax expense
- deferred tax assets and liabilities
- current tax liabilities
- other financial liabilities
- intangible assets
- discontinued operations; and
- retirement benefit obligations.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Fair Value of Assets and Liabilities

The Group measures some of its assets and liabilities at fair value on either a recurring or non-recurring basis after initial recognition, depending on the requirements of the applicable Accounting Standard.

Fair value is the price the Group would receive to sell an asset or would have to pay to transfer a liability in an orderly (ie unforced) transaction between independent, knowledgeable and willing market participants at the measurement date.

Financial Instruments

Initial recognition and measurement

Financial assets and financial liabilities are recognised when the Group becomes a party to the contractual provisions to the instrument. For financial assets, this is the date that the Group commits itself to either the purchase or sale of the asset (ie trade date accounting is adopted).

Financial instruments are initially measured at fair value plus transaction costs, except where the instrument is classified "at fair value through profit or loss", in which case transaction costs are expensed to profit or loss immediately.

Financial liabilities

Financial liabilities are subsequently measured at amortised cost using the effective interest method.

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest expense in profit and loss over the relevant period. The effective interest rate is the internal rate of return of the financial asset or liability. That is, it is the rate that exactly discounts the estimated future cash flows through the expected life of the instrument to the net carrying amount at initial recognition.

Financial assets

Financial assets are subsequently measured at amortised cost.

Measurement is on the basis of two primary criteria:

- the contractual cash flow characteristics of the financial asset; and
- the business model for managing the financial assets.

A financial asset that meets the following conditions is subsequently measured at amortised cost:

- the financial asset is managed solely to collect contractual cash flows; and
- the contractual terms within the financial asset give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding on specified dates.

Derecognition

Derecognition refers to the removal of a previously recognised financial asset or financial liability from the statement of financial position.

Derecognition of financial liabilities

A liability is derecognised when it is extinguished (ie when the obligation in the contract is discharged, cancelled or expires). An exchange of an existing financial liability for a new one with substantially modified terms, or a substantial modification to the terms of a financial liability is treated as an extinguishment of the existing liability and recognition of a new financial liability.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss.

Derecognition of financial assets

A financial asset is derecognised when the holder's contractual rights to its cash flows expires, or the asset is transferred in such a way that all the risks and rewards of ownership are substantially transferred.

All of the following criteria need to be satisfied for derecognition of a financial asset:

- the right to receive cash flows from the asset has expired or been transferred;
- all risk and rewards of ownership of the asset have been substantially transferred; and
- the Group no longer controls the asset (ie the Group has no practical ability to make a unilateral decision to sell the asset to a third party).

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

Impairment

The Group recognises a loss allowance for expected credit losses, using the simplified approach under AASB 9, which requires the recognition of lifetime expected credit loss at all times.

Foreign Currency Transactions and Balances

Functional and presentation currency

The functional currency of each of the Group's entities is measured using the currency of the primary economic environment in which that entity operates. The consolidated financial statements are presented in Australian dollars which is the parent entity's functional currency.

Transaction and balances

Foreign currency transactions are translated into functional currency using the exchange rates prevailing at the date of the transaction. Foreign currency monetary items are translated at the year-end exchange rate. Non-monetary items measured at historical cost continue to be carried at the exchange rate at the date of the transaction. Non-monetary items measured at fair value are reported at the exchange rate at the date when fair values were determined.

Exchange differences arising on the translation of monetary items are recognised in profit or loss, except where deferred in equity as a qualifying cash flow or net investment hedge.

Exchange differences arising on the translation of non-monetary items are recognised directly in other

The financial results and position of foreign operations whose functional currency is different from the Group's presentation currency are translated as follows:

- assets and liabilities are translated at year-end exchange rates prevailing at that reporting date;
- income and expenses are translated at average exchange rates for the period; and
- retained earnings are translated at the exchange rates prevailing at the date of the transaction.

Exchange differences arising on translation of foreign operations with functional currencies other than Australian dollars are recognised in other comprehensive income and included in the foreign currency translation reserve in the statement of financial position. The cumulative amount of these differences is reclassified into profit or loss in the period in which the operation is disposed of.

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Employee Benefits

The Group's obligations for short-term employee benefits such as wages, salaries and sick leave are recognised as a part of current trade and other payables in the statement of financial position. The Group's obligations for employees' annual leave and long service leave entitlements are recognised as provisions in the statement of financial position.

Other long-term employee benefits

Provision is made for employees' long service leave and annual leave entitlements not expected to be settled wholly within 12 months after the end of the annual reporting period in which the employees render the related service. Other long-term employee benefits are measured at the present value of the expected future payments to be made to employees. Expected future payments incorporate anticipated future wage and salary levels, durations of service and employee departures and are discounted at rates determined by reference to market yields at the end of the reporting period on government bonds that have maturity dates that approximate the terms of the obligations. Any remeasurements for changes in assumptions of obligations for other long-term employee benefits are recognised in profit or loss in the periods in which the changes occur.

The Group's obligations for long-term employee benefits are presented as non-current provisions in its statement of financial position, except where the Group does not have an unconditional right to defer settlement for at least 12 months after the end of the reporting period, in which case the obligations are presented as current provisions.

Equity Settled (Share Based) Payments

The Group uses shares and options to settle liabilities. Share-based payments to employees are measured at the fair value of the instruments issued and amortised over the vesting periods. Share-based payments to non-employees are measured at the fair value of goods or services received or the fair value of the equity instruments issued, if it is determined the fair value of the goods or services cannot be reliably measured, and are recorded at the date the goods or services are received.

The fair value of options is determined using a binomial pricing model. The number of shares and options expected to vest is reviewed and adjusted at the end of each reporting period such that the amount recognised for services received as consideration for the equity instruments granted is based on the number of equity instruments that eventually vest.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits available on demand with banks and other short-term highly liquid investments with original maturities of three months or less.

Provisions

Provisions are recognised when the Group has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured.

Provisions are measured using the best estimate of the amounts required to settle the obligation at the end of the reporting period.

Trade and Other Payables

Trade and other payables represent the liabilities for goods and services received by the entity that remain unpaid at the end of the reporting period. The balance is recognised as a current liability with amounts normally paid within 30 days of recognition of the liability. Amounts are initially recognised at fair value, and subsequently measured at amortised cost.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Issued Capital

Ordinary shares are classified as equity. Transaction costs (net of tax, where the deduction can be utilised) arising on the issue of ordinary shares are recognised in equity as a reduction of the share proceeds received.

Where share application monies have been received, but the shares have not been allotted, these monies are shown as a payable in the statement of financial position.

Share options are classified as equity and issue proceeds are taken up in the option reserve. Transaction costs (net of tax where the deduction can be utilised) arising on the issue of options are recognised in equity as a reduction of the option proceeds received.

Revenue and Other Income

The Group's revenue is interest and sundry income, recognised on an accrual basis.

Interest revenue is recognised using the effective interest method. All revenue is stated net of the amount of goods and services tax.

Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the taxation authority.

Receivables and payables are stated inclusive of the amount of GST receivable or payable. The net amount of GST recoverable from, or payable to, the taxation authority is included with other receivables or payables in the statement of financial position.

Cash flows are presented on a gross basis. The GST components of cash flows arising from investing or financing activities are presented as operating cash flows included in receipts from customers or payments to suppliers.

These accounting policies also apply in respect of the Group's Canada operations in relation to GST.

Comparative Figures

When required by Accounting Standards, comparative figures have been adjusted to conform to changes in presentation for the current financial year.

Earnings per Share (EPS)

Basic earnings per share

Basic earnings per share is calculated by dividing the loss attributable to equity holders of the parent entity, excluding any costs of servicing equity other than ordinary shares, by the weighted average number of ordinary shares outstanding during the financial year, adjusted for any bonus elements in ordinary shares issued during the year.

Diluted earnings per share

Diluted earnings per ordinary share adjusts the figures used in the determination of basic earnings per share to take into account the after income tax effect of interest and other financing costs associated with dilutive potential ordinary shares and the weighted average number of shares assumed to have been issued for no consideration in relation to dilutive potential ordinary shares.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Adjusting Events

The weighted average number of shares outstanding during the period and for all periods presented are adjusted for events, other than the conversion of potential ordinary shares, that have changed the number of ordinary shares outstanding without a corresponding change in resources.

Critical Accounting Estimates and Judgements

The directors evaluate estimates and judgments incorporated into the financial report based on historical knowledge and best available current information. Estimates assume a reasonable expectation of future events and are based on current trends and economic data, obtained both externally and within the Group.

The Group has identified new significant judgements and estimates and assumptions in the half year period:

Significant Judgements:

· **Accounting for acquisition of a business**

The Group completed the acquisition of North American Lithium Inc (NAL) on 27 August 2021.

Accounting for business combinations under the scope of AASB3: Business Combinations is complex and requires judgements and estimates to be made in determining several matters including but not limited to:

- Identifying the acquirer
- Determining the date on which the Group achieved control of the subsidiary
- Determining the purchase price consideration paid
- Identifying the assets acquired and liabilities assumed as part of the transaction, and
- Determining the fair values to be attributed to the identifiable assets acquired and liabilities assumed.

· **Purchase Price Consideration**

Other NAL assets and liabilities (i.e. other than those detailed above) were excluded from the valuation prepared by the independent expert. The book value of other assets and liabilities acquired, namely current accounts receivable and current accounts payable and accruals as at acquisition date were assumed to approximate their fair value.

As detailed in Note 5(A) the purchase price consideration included cash and the issue of redeemable preference shares.

The difference between the consideration paid by the vendors for the fair value of the assets acquired and liabilities assumed at acquisition date, resulted in a A\$108,374,739 gain on acquisition. The fair value of the assets acquired and liabilities assumed was estimated by calculating the present value of the future expected cash flows. A discount rate of 10% was used.

Significant judgements are involved in assessing the future cash flows of the acquired business, including revenue, expenditure and growth rates applied for revenue and gross margin. The assessment of discount rates required judgement, with the IRR determined as the appropriate discount rate.

Judgement has been applied as to valuation methodology and valuation range. The directors engaged an independent expert to assist. In determining the fair value of NAL the independent expert prepared an Estimate Valuation Report in conformity with Canadian Institute of Chartered Business Valuators Practice Standards for valuation reports in respect of the following NAL assets and liabilities:

- Plant and equipment
- Mining Interest
- Reclamation Provision

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

· Impairment - general

The Group assesses impairment at the end of each reporting period by evaluating conditions and events specific to the Group that may be indicative of impairment triggers.

· Exploration and evaluation expenditure

The Group capitalises expenditure relating to exploration and evaluation where it is considered likely to be recoverable or where the activities have not reached a stage that permits a reasonable assessment of the existence of reserves. For some areas of interest the Group has assessed the existence of reserves and considers the expenditure is recoverable through successful development of the area. For other areas of interest exploration activity continues and the directors are of the continued belief that such expenditure should not be written off since technical and feasibility studies in such areas have not yet concluded.

· Royalty Advance - Other Liability

The Group will amortise the royalty advance (deferred revenue) in line with the contractual obligations as agreed with the funder (LRC) in the agreement dated 8 August 2021. These requirements refer to royalties payable based on production tonnages and either a Gross Overriding Revenue (GOR) royalty being applied or a Net Smelter Return (NSR) being applied – depending on the property. The royalty advance will be amortised in accordance with the tonnages produced.

Significant Estimates:

· Uncertain tax position - Unutilised tax losses on acquisition

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances arises. The adjustment is treated as a reduction to goodwill if it has occurred during the measurement period or if outside the recognition period, is recognised in the statement of profit or loss and other comprehensive income.

· Functional currency

Management have determined the functional currency for the parent entity and its subsidiaries, is the currency of the primary economic environment in which the entity operates, which is the Australian dollar. The currencies of entities in the Group are the Canadian dollar and Australian dollar. Determining the functional currency involves judgements to identify the primary economic environment and the Company will reconsider the functional currency of its entities if there is a change in events and conditions which determined the primary economic environment.

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NOTES TO THE FINANCIAL STATEMENTS

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NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

· Mine restoration

The ultimate mine restoration costs are uncertain, and costs estimates can vary in response to many factors including estimates of the extent of costs of rehabilitation activities, technological changes, regulatory changes, cost increases compared to inflation rates and changes in discount rates. The provision at reporting date represents management's best estimate of the present value of the future rehabilitation costs required.

· Tax losses available

The availability of the Group's carry forward tax losses are based on estimates of tax deductibility of exploration expenditure, and compliance with tax laws in Australia and Canada.

New Accounting Standards Adopted

There have been no new accounting standards applied for the first time in the preparation of the financial statements for the year ended 30 June 2022. New accounting standards issued as at 30 June 2022 that are not yet applicable are not expected to have a material effect on the amounts reported in the financial statements.

AASB 2020-8: Amendments to Australian Accounting Standards - Interest Rate Benchmark Reform - Phase 2

The Group has applied AASB 2020-8 which amends various standards to help listed entities to provide financial statement users with useful information about the effects of the interest rate benchmark reform on those entities financial statements.

As a result of these amendments, an entity:

- a) will not have to derecognise or adjust the carrying amount of financial instruments for changes required by the reform, but will instead update the effective interest rate to reflect the change to the alternative benchmark rate;
- b) will not have to discontinue its hedge accounting solely because it makes changes required by the reform, if the hedge meets other hedge accounting criteria; and
- c) will be required to disclose information about new risks arising from the reform and how it manages the transition to alternative benchmark rates.

New and Amended Accounting Standards Not Yet Adopted by the Group

AASB 2020-3: Annual Improvements to IFRS Standards 2018-2020 and Other Amendments

This Standard amends:

- a) the application of AASB 1 by a subsidiary that becomes a first-time adopter after its parent in relation to the measurement of cumulative translation differences;
- b) AASB 3 to update references to the Conceptual Framework for Financial Reporting;
- c) AASB 9 to clarify when the terms of a new or modified financial liability are substantially different from the terms of the original financial liability;
- d) AASB 116 to require an entity to recognise the sales proceeds from selling items produced while preparing property, plant and equipment for its intended use and the related cost in profit or loss, instead of deducting the amounts received from the cost of the asset;
- e) AASB 137 to specify the costs that an entity includes when assessing whether a contract will be loss-making; and
- f) AASB 141 to align the fair value measurement requirements in AASB 141 with those in other Australian Accounting Standards.

The Group plans on adopting the amendment for the reporting period ending 30 June 2023. The impact of the initial application is not yet known.

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AASB 2020-1: Amendments to Australian Accounting Standards – Classification of Liabilities as Current or Non-Current

Amends AASB 101 to clarify that liabilities are classified as either current or non-current, depending on the rights that exist at the end of the reporting period. Classification is unaffected by the expectations of the entity or events after the reporting date (for example, the receipt of a waiver, a breach of covenant, or settlement of the liability). The mandatory application date of the amendment has been deferred by 12 months to 1 January 2023 by AASB 2020-6.

The Group plans on adopting the amendment for the reporting period ending 30 June 2024. The amendment is not expected to have a material impact on the financial statements once adopted.

AASB 2021-2: Amendments to Australian Accounting Standards – Disclosure of Accounting Policies and Definition of Accounting Estimates

This Standard amends:

- a) AASB 7, to clarify that information about measurement bases for financial instruments is expected to be material to an entity's financial statements;
- b) AASB 101, to require entities to disclose their material accounting policy information rather than their significant accounting policies;
- c) AASB 108, to clarify how entities should distinguish changes in accounting policies and changes in accounting estimates;
- d) AASB 134, to identify material accounting policy information as a component of a complete set of financial statements; and
- e) AASB Practice Statement 2, to provide guidance on how to apply the concept of materiality to accounting policy disclosures.

Additional conforming amendments to AASB 1049, AASB 1054, and AASB 1060 were made by AASB 2021-6.

The Group plans on adopting the amendment for the reporting period ending 30 June 2024. The impact of the initial application is not yet known.

AASB 2021-5: Amendments to Australian Accounting Standards – Deferred Tax related to Assets and Liabilities arising from a Single Transaction

The amendment narrowed the scope of the recognition exemption in paragraphs 15 and 24 of AASB 112 (recognition exemption) so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The amendment applies to transactions that occur on or after the beginning of the earliest comparative period presented.

The Group plans on adopting the amendment for the reporting period ending 30 June 2024. The impact of the initial application is not yet known.

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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 2: REVENUE AND OTHER INCOME

	2022	2021
	\$	\$
(a) Revenue		
Revenue from contracts with customers	-	-
Other sources of revenue:		
Interest received:		
unrelated parties	110,638	2,252
Government subsidy and incentive receipts (R&D/Cashboost)	42,133	315,190
Royalty payments	92,255	-
FX Currency gain	-	310,361
Other income	253,192	17,584
Total revenue and other revenue	<u>498,218</u>	<u>645,387</u>
(b) Other Income		
Gain from bargain purchase	108,374,739	-
Total revenue and other income	<u>108,872,957</u>	<u>645,387</u>

NOTE 3: PROFIT/(LOSS) FOR THE YEAR

(i) Expenses:

Included in expenses are the following items:

Depreciation and amortisation expense:-		
Depreciation and amortisation	11,969	13,654
Amortisation on right of use assets	38,100	38,104
	<u>50,069</u>	<u>51,758</u>
Finance costs:-		
Lease Liabilities	1,430	3,665
Preference shares	926,642	-
	<u>928,072</u>	<u>3,665</u>
Short term lease expenses	213,639	44,120
Defined Benefit Contribution superannation expenses	60,510	59,125

(ii) Significant Revenue and Expenses

The following significant revenue and expense items are relevant in explaining the financial performance:

Transaction cost on Moblan acquisition	1,352,809	-
Royalty buy-back - Tansim royalty cost	2,169,752	-
Finance costs - preference shares	926,642	-
Capitalised exploration & evaluation expenditure written-off	-	81,708
Net foreign exchange loss/(gain)	2,108,773	-
Finance broker fees	678,474	769,971
Capital raising fees and commissions expenses	-	160,876
Legal advisory and registry management	1,701,782	878,274

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 4: INCOME TAX EXPENSE

(a) The prima facie tax on loss from ordinary activities is reconciled to the income tax as follows:

Prima facie tax payable on profit from ordinary activities before income tax at 25.0% (2021: 26%).	20,921,543	(1,138,669)
Adjust for tax effect of:		
Non-Deductible Expenses	2,543,441	218,135
Other non-assessable income	(10,533)	(85,982)
Gain from bargain purchase	(27,093,685)	-
Tax losses and temporary differences not brought to account	3,639,234	1,006,516
Income tax expense attributable to entity	<u>-</u>	<u>-</u>
Weighted average effective tax rate (nil due to tax losses)	0.00%	0.00%

	2022	2021
	\$	\$
(b) Deferred tax assets and liabilities not brought to account, the net benefit of which will only be realised if the		
Temporary differences	(25,744,785)	(726,827)
Tax losses - Revenue	48,768,951	7,018,041
Tax losses - Capital	5,613,671	5,613,671
Net unbooked deferred tax asset	<u>28,637,837</u>	<u>11,904,885</u>

The Group has unconfirmed carry forward losses for revenue of A\$185,272,561 (2021: A\$27,608,259) and for capital of A\$22,454,683 (2021: A\$22,454,683). Deferred tax assets and liabilities are stated at tax rates expected to apply when the relevant items are realised. Prior year carry forward revenue losses have been revised in the current year to agree to amended tax returns due for lodgement.

The tax benefits will only be obtained if the conditions in Note 1 are satisfied; the economic entity derives future assessable income of a nature and of an amount sufficient to enable the benefit from the deductions for the losses to be realised and if the economic entity continues to comply with the conditions for deductibility imposed by the relevant tax legislation.

(c) The tax expense of each component of comprehensive income :

Consolidated Group

Exchange gain differences on translating foreign operations:		
Before Tax	14,105,312	(18,639)
Tax (expense)/benefit	-	-
Net of tax amount	<u>14,105,312</u>	<u>(18,639)</u>

SAYONA MINING LIMITED AND CONTROLLED ENTITIES

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 5: SIGNIFICANT TRANSACTION AND EVENTS

This section provides additional information which will help users understand how changes in the Group structure have impacted the financial position and performance of the Group as a whole and the significant events that have occurred during the year impacting the financial position and performance of the Group.

(A) Business Combinations

The Group acquired 100% of the issued capital of Lithium Amerique Du Nord Inc (North American Lithium Inc. - NAL), a known lithium reserve and former producer of spodumene, on 27 August 2021, for a purchase consideration of A\$128.6M.

The acquisition is part of the Group's strategy to integrate NAL's assets with its nearby Authier Lithium Project and expand its lithium reserves and processing operations in the lithium battery industry.

(a) Acquisition date fair values - NAL

The fair values of identifiable assets and liabilities of NAL as at the date of acquisition were:

Fair value on acquisition

	A\$	C\$
Assets		
Mine properties (pre-production) (1)	59,889,276	54,905,000
Mine plant and equipment	203,387,264	186,460,390
Receivables (2)	3,031,408	2,779,120
Cash and cash equivalents	1,524,703	1,397,810
	<u>267,832,651</u>	<u>245,542,320</u>
Liabilities		
Trade and other payables	(720,025)	(660,102)
Provisions (Note 18)	(30,133,223)	(27,625,390)
	<u>(30,853,248)</u>	<u>(28,285,492)</u>
Total identifiable net assets at fair value	236,979,403	217,256,828
Gain from bargain purchase	(108,374,739)	(99,355,268)
Total consideration	<u>128,604,664</u>	<u>117,901,560</u>

(1) Because the mine was in care and maintenance prior to acquisition, significant expenditure is planned to restore operations to full commercial production stage.

(2) The directors believe the receivables are fully recoverable and no provision for impairment is required.

(b) Acquisition-date fair value of consideration transferred

	A\$	C\$
Cash paid	106,789,064	97,901,560
Preference shares issued	21,815,600	20,000,000
	<u>128,604,664</u>	<u>117,901,560</u>

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 5: SIGNIFICANT TRANSACTION AND EVENTS (continued)

The Group used a discounted cash flow model to estimate acquisition fair values, based on the life-of-mine plans. Expected future cash flows are based on estimates of future production and commodity prices, operating costs, and forecast capital expenditures using the life-of-mine plan as at the acquisition date.

A replacement-cost approach was used to determine the fair value of other property, plant and equipment.

The gain from bargain purchase of A\$108M arises principally because of the following factors:

- (a) NAL filed for bankruptcy protection in May 2019 and the sale process did not occur until 2021, more than two years after the commencement of bidding for an asset in a Companies' Creditors Arrangement Act ("CCAA") process and thus the price paid can be lower than full value in a non-bankruptcy sale;
- (b) Over the 12 months prior to approval of the Group's bid, a number of government restrictions including travel restrictions were in place due to the COVID-19 pandemic. It is possible that travel restrictions and capital markets uncertainties resulting from COVID-19 also impacted the market competition for the NAL assets;
- (c) NAL had over C\$400M invested. NAL's historical investment in mining, concentrate and refining capacity significantly exceeds the aggregate purchase price; and
- (d) The Company's share price was A\$0.031 and market capitalization was A\$138.9M on 26 May 2021, the day prior to signing an agreement to acquire NAL. At the end of business day on 27 May, the Company's share price rose to A\$0.045 and market capitalization increased to A\$201.5M, an increase of approximately 45%. This demonstrates the market's view that the NAL acquisition is value accretive to the Group.

From the date of acquisition to 30 June 2022, NAL bargain purchase contributed A\$108M to Group revenue and A\$105M to Group profit.

Included within other expenses in the statement of profit or loss and other comprehensive income are acquisition-related costs totalling A\$130,380. The costs include advisory, legal, accounting and other professional fees.

(B) Joint Arrangements - 'Moblan'

During the period, the Group entered into a joint arrangement in Quebec through the acquisition of a 60% interest in the Moblan Lithium Project for US\$86.5M (A\$116.7M on the date of acquisition) and transaction costs of A\$1,352,809 were incurred. The remaining 40% interest is held by SOQUEM Inc., a wholly owned subsidiary of Investissement Québec. Sayona will manage the project on behalf of the joint holders.

Under the agreement with Lithium Royalty Corp. (LRC), Sayona acquired a 60% interest in the Moblan project held by Guo Ao Lithium Ltd. The project includes certain mineral claims, technical data and studies as well as the rights of Guo Ao in the joint venture formed with SOQUEM.

In consideration for the assignment by LRC of its rights to acquire the Moblan Interest, Sayona has agreed to the following terms with LRC:

- (a) In consideration for a US\$5M payment by LRC, the grant by Sayona to LRC of a Gross Overriding Revenue (GOR) Royalty on the Moblan Interest, calculated as follows:
 - (i) 2.5% for the first 1 million tonnes (Mt) of ore per annum produced from the Moblan Project;
 - (ii) 1.5% for any tonne of ore per annum produced from the Moblan Project in excess of the first 1 Mt.
- (b) In consideration for a US\$3M payment by LRC, Sayona will cause the transfer to LRC of the 2% Net Smelter Return (NSR) Royalty currently owned by Quebec Precious Metals Inc. on the Tansim project;
- (c) In consideration for a US\$500,000 payment by LRC, the grant by Sayona to LRC of a 1.5% GOR Royalty on Sayona's Mallina Project in Western Australia;
- (d) Sayona and LRC have also agreed to enter into an offtake agreement with respect to the Moblan Project on the following key terms:
 - (i) 10% of Sayona's ownership participation in the Moblan Project of the annual production for life of mine;
 - (ii) price at a 5% discount to the prevailing market terms; and
- (e) Payment by Sayona to LRC of a US\$1M structuring fee on closing of the acquisition of LRC's rights to acquire the Moblan Interest.

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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 5: SIGNIFICANT TRANSACTION AND EVENTS (continued)

(C) Share Placement

On 27 May 2022, the Group successfully completed a A\$190M institutional placement to fund the NAL restart and provide additional working capital for other broader development initiatives. The proceeds are primarily to fund the restart of NAL operation in Quebec, Canada amid rapidly growing demand for battery metals produced in North America. The recent Pre Feasibility Study (PFS) for NAL demonstrated the operation's technical and financial viability and will form the basis of a Definitive Feasibility Study (DFS) expected in the second half of 2022.

NOTE 6: KEY MANAGEMENT PERSONNEL COMPENSATION

Refer to the remuneration report contained in the directors report for details of the remuneration paid or payable to each member of the Group's key management personnel (KMP), and other information (including equity interests) for the year ended 30 June 2022.

(a) The names of key management personnel of the Group who have held office during the financial year are:

Key Management Personnel	Position
Brett Lynch	Managing Director/CEO
Paul Crawford	Director - Executive
Allan Buckler	Director - Non-executive
James Brown	Director - Non-executive

(b) The totals of remuneration paid to KMP of the Company and Group during the year are as follows:

	2022 \$	2021 \$
Short-term employee benefits	1,247,105	1,791,585
Post-employment benefits	41,759	52,169
Other long-term benefits	-	-
Share-based payments	3,584,500	-
Total KMP compensation	4,873,364	1,843,754

Short-term employee benefits

These amounts include salary, fees and paid leave benefits paid to the directors, or their related entities (Note 25).

Post-employment benefits

These amounts are the superannuation contributions made during the year.

Other long-term benefits

These amounts represent long service benefits accruing during the year.

Share-based payments

These amounts represent the expense related to the participation of KMP in equity-settled benefit schemes as measured by the fair value of the options, and shares granted on grant date.

NOTE 7: EARNINGS PER SHARE

The earnings figures used in the calculation of both the basic EPS and the dilutive EPS are the same as the profit or loss in the statement of profit or loss and other comprehensive income.

Weighted average number of ordinary shares outstanding during the year used in the calculation of basic EPS

Weighted average number of options outstanding

Weighted average number of ordinary shares and potential ordinary shares outstanding during the year used in the calculation of diluted EPS

Options to acquire ordinary shares in the parent company are the only securities considered as potential ordinary shares in determination of diluted EPS. These securities are not presently dilutive and have been included in the calculation of diluted EPS.

	2022 \$	2021 \$
Weighted average number of ordinary shares outstanding during the year used in the calculation of basic EPS	6,794,835,604	3,431,676,525
Weighted average number of options outstanding	407,180,140	-
Weighted average number of ordinary shares and potential ordinary shares outstanding during the year used in the calculation of diluted EPS	7,202,015,744	3,431,676,525

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 8: AUDITORS' REMUNERATION

	2022 \$	2021 \$
Remuneration of the auditor for:		
- auditing or reviewing the financial reports	211,325	53,000
- other assurance services	-	-
	<u>211,325</u>	<u>53,000</u>

NOTE 9: CASH AND CASH EQUIVALENTS

Cash at bank and on hand	184,509,499	35,452,596
Short-term bank deposits	50,000	50,000
Cash at bank and on hand	27	27
	<u>184,559,499</u>	<u>35,502,596</u>

The effective interest rate on short-term bank deposits was 0.06% (2021: 0.1%). These deposits have an average maturity of 25 days.

Reconciliation of cash

Cash at the end of the financial year as shown in the statement of cash flow is reconciled to items in the statement of financial position as follows:

Cash and cash equivalents	184,559,499	35,502,596
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NOTE 10: TRADE AND OTHER RECEIVABLES

	2022 \$	2021 \$
Current (unsecured):		
Trade and other debtors (a)	9,680,669	4,612,500
Receivable - share issue (b)	-	5,800,000
	27	27
	<u>9,680,669</u>	<u>10,412,500</u>

Financial assets at amortised cost classified as Trade and other receivables:

(a) Other debtors include A\$5,809,385 of GST/VAT amounts due from the Australian and Canadian taxation authorities, which represents a significant concentration of credit risk to the Group. A further A\$3,112,872 (C\$2,804,682) in Sayona Quebec Inc. cash calls were in transit at year end. Funds were received in July 2022.

Other debtors in the prior year included A\$4,223,088 for the initial deposits lodged in support of our bid for the acquisition of North American Lithium (NAL). Subsequent to year end, the deposits were utilised as part of the settlement of acquisition of NAL.

(b) The prior year share issue receivable relates to shares issued pursuant to a Controlled Placement Agreement with Acuity Capital. Shares were issued on 30 June 2021, with funds received on 1 July 2021.

Financial assets at amortised cost classified as Trade and other receivables (Refer Note 27):

	<u>9,680,669</u>	<u>10,412,500</u>
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NOTE 11: OTHER ASSETS

	2022 \$	2021 \$
Current:		
Deposits	27	-
Prepayments	13,120,369	43,648
	579,825	-
	<u>13,700,194</u>	<u>43,648</u>

Under the terms of the rehabilitation fund, the Group have obtained a Revocable Line of Credit from Desjardin Bank for C\$15M, with C\$9.6M of the facility having been utilised.

As security for the Revocable Line of Credit, there are 2 term deposits totalling C\$9.6M lodged with Desjardin Bank.

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NOTE 12: MINE PROPERTIES	2022	2021
	\$	\$
Opening balance	-	-
Acquisition refer (Note 5(A))	59,889,276	-
Foreign currency translation movement	1,893,783	-
Closing balance	<u>61,783,059</u>	<u>-</u>

During the period, the Group acquired the mining interests in North American Lithium Inc (NAL). The Group plans to refurbish the production facilities and recommence production. The mine properties are valued at fair value on a non-recurring basis.

NOTE 13: PROPERTY, PLANT AND EQUIPMENT	2022	2021
	\$	\$
Property, plant and equipment		
Land and buildings		
At cost	76,591,770	148,164
Accumulated depreciation	(13,970)	(11,648)
FX Adjustment	2,425,189	779
	<u>79,002,989</u>	<u>137,295</u>
Office and mobile equipment		
At Cost	1,714,923	8,110
Accumulated Depreciation	(6,933)	(3,757)
FX Adjustment	17,031	-
	<u>1,725,021</u>	<u>4,353</u>
Machinery and equipment		
At Cost	126,285,499	27,204
Accumulated Depreciation	(14,406)	(6,797)
FX Adjustment	4,155,700	167
	<u>130,426,793</u>	<u>20,574</u>
Capital works in progress		
At Cost	21,226,987	-
Transfers	-	-
FX Adjustment	-	-
	<u>21,226,987</u>	<u>-</u>
Total property, plant and equipment	<u>232,381,790</u>	<u>162,222</u>

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 13: PROPERTY, PLANT AND EQUIPMENT (Continued)

	Land & Buildings	Office & Mobile Equip	Machinery & Equipment	Capital Works in Progress	Total
	\$	\$	\$	\$	\$
Consolidated Group					-
Balance as at 1 July 2020	118,061	8,110	25,549	-	151,720
Additions	30,103		1,655	-	31,758
Disposals	-	-	-	-	-
Acquisitions through business combinations	-	-	-	-	-
Depreciation Expense	(11,648)	(3,757)	(6,797)	-	(22,202)
FX Adjustment	779	-	167	-	946
Balance as at 30 June 2021	<u>137,295</u>	<u>4,353</u>	<u>20,574</u>	<u>-</u>	<u>162,222</u>
Balance as at 1 July 2021	137,295	4,353	20,574	-	162,222
Additions		1,021,282	-	21,226,987	22,248,269
Disposals	-	-	-	-	-
Additions through acquisition (Note 5(A))	76,443,606	685,531	126,258,128	-	203,387,265
Depreciation Expense	(2,322)	(3,176)	(7,609)	-	(13,107)
FX Adjustment	2,424,410	17,031	4,155,700	-	6,597,141
Balance as at 30 June 2022	<u>79,002,989</u>	<u>1,725,021</u>	<u>130,426,793</u>	<u>21,226,987</u>	<u>232,381,790</u>

Capital Works in Progress represents the cost of the replacement assets or parts thereof that have been or will be used as part of the NAL plant refurbishment due for completion at the end of March 2023. The planned cost of the refurbishment is estimated to be costing around C\$98M (A\$110M).

NOTE 14: EXPLORATION AND EVALUATION ASSET

	2022	2021
	\$	\$
Exploration and evaluation expenditure carried forward in respect of areas of interest are:		
Exploration and evaluation phase - group interest 100% (a)	34,800,724	23,523,843
Exploration and evaluation phase - subject to joint operation (b)	124,061,266	2,028,885
	<u>158,861,990</u>	<u>25,552,728</u>
(a) Movement in exploration and evaluation expenditure:	Non-Joint Operation	
Opening balance - at cost	23,523,843	17,839,978
Capitalised exploration and evaluation expenditure	7,972,562	3,805,078
Transfer (to)/from joint operations	1,908,058	1,842,720
Capitalised exploration expenditure written-off	-	(81,708)
Foreign currency translation movement	1,396,261	117,775
Carrying amount at end of year	<u>34,800,724</u>	<u>23,523,843</u>

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NOTE 14: EXPLORATION AND EVALUATION ASSET (Continued)	2022 \$	2021 \$
Joint Operation		
(b) Movement in exploration and evaluation expenditure:		
Opening balance - at cost	2,028,885	3,353,128
Capitalised exploration and evaluation expenditure	2,342,622	508,642
Additions through acquisition (Note 5(B))	116,561,471	-
Transfer from/ (to) non-joint operations	(1,908,058)	(1,842,720)
Capitalised exploration expenditure written-off	-	9,835
Foreign currency translation movement	5,036,346	-
Carrying amount at end of year	<u>124,061,266</u>	<u>2,028,885</u>

Recoverability of the carrying amount of exploration assets is dependent on the successful exploration and development of projects, or alternatively, through the sale of the areas of interest.

During the period, the Group entered into a Earn-In Agreement for its Pilbara lithium tenement portfolio with Morella Corporation Limited (formerly known as Altura Mining Limited). Morella had not earned any interest in the tenements as at 30 June 2022.

During the period, the Group entered into a joint arrangement in Canada through the acquisition of a 60% interest in the Moblan Lithium Project for US\$86.5 million. The remaining 40% interest is held by SOQUEM Inc., a wholly owned subsidiary of Investissement Québec. The Group will manage the project on behalf of the joint holders.

Located approximately 130km north-west of Chibougamau, Moblan is host to high-grade spodumene mineralisation, with a Mineral Resource Foreign Estimate of 12.03Mt @ 1.4% Li2O. It is hosted in a well-studied deposit, with previous exploration work comprising 132 diamond drill holes for more than 17,559 metres.

Movements during the year on exploration and evaluation assets in Canada included A\$7,679,030 (2021: A\$2,338,349) on the NAL and Authier project, together with A\$2,598,621 (2021:nil) on the Moblan project . A further A\$663,774 (2021: A\$265,601) was incurred on the Australian projects.

On 2 March 2022, the Group paid the final C\$50,000 option payment to Exiro Minerals Inc. to acquire the remaining interest in relevant Tansim tenements. The Group now holds a 100% interest in the tenements.

Commitments in respect of exploration projects are set out in Note 26. In addition, the Group has options on projects as set out in Note 30.

NOTE 15: INTANGIBLE ASSETS	2022 \$	2021 \$
Computer Software (at cost)	164,294	-
Accumulated depreciation	20,581	-
Total net intangibles	<u>184,875</u>	<u>-</u>
Computer Software		
\$		
Year Ended 30 June 2021		
Balance at the beginning of the year		-
Additions		164,294
Acquisitions		-
FX Adjustment		20,581
Year Ended 30 June 2022		<u>184,875</u>

Computer software is initially recorded at cost. It has a finite life and is carried at cost less accumulated amortisation and any impairment losses.

Software has an estimated useful life of between one and three years. It is assessed annually for impairment.

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NOTE 16: RIGHT-OF-USE-ASSETS & LEASE LIABILITY

The Group has a lease of premises with possible expiry in 2022. Lease payments are subject to annual adjustments, and there is an option to extend.

Right-of-use assets	2022	2021
	\$	\$
Leased premises	123,836	123,836
Accumulated depreciation	(114,307)	(76,207)
	<u>9,529</u>	<u>47,629</u>
Movement in carrying amounts:		
Opening balance at cost	47,629	85,733
Depreciation expense	(38,100)	(38,104)
Net carrying amount	<u>9,529</u>	<u>47,629</u>
Lease liability		
- Current	10,240	37,540
- Non Current	-	15,224
	<u>10,240</u>	<u>52,764</u>
Depreciation charge related to right-of-use assets	(38,100)	38,106
Interest expense on lease liabilities	1,430	3,665
Total yearly cash outflows for leases	<u>39,600</u>	<u>39,600</u>

NOTE 17: TRADE AND OTHER PAYABLES

Current (unsecured):	2022	2021
	\$	\$
Trade creditors	5,146,065	1,648,184
Sundry creditors and accrued expenses	1,775,887	2,017,376
Total trade and other payables	<u>6,921,952</u>	<u>3,665,560</u>
Financial liabilities at amortised cost classified as trade and other payables:		
Financial liabilities as trade and other liabilities (refer Note 27)	<u>6,921,952</u>	<u>3,665,560</u>

NOTE 18: PROVISIONS

Current:	2022	2021
	\$	\$
Provision for employee entitlements	323,787	116,872
Opening balance	116,872	61,429
Additional provisions	266,128	64,734
Amounts used	(59,213)	(9,291)
Balance at year end	<u>323,787</u>	<u>116,872</u>

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NOTE 18: PROVISIONS (Continued)

	2022	2021
	\$	\$
Non Current		
Provision for mine restoration	31,085,639	-
Opening balance	-	-
Additions through acquisition (Note 5(A))	30,133,223	-
Additional provisions	-	-
Amounts used	-	-
Foreign currency translation movement	952,416	-
Balance at year end	31,085,639	-

Provision for Mine Restoration

The Group acquired a provision for the future cost of rehabilitating mine sites and related production facilities as part of the NAL acquisition.

The provision represents the present value of rehabilitation costs, which are expected to be incurred up to the time when the producing mine properties cease operations. These provisions have been created based on the Group's internal estimates and modified by the Ministère de l'Énergie et des Ressources Naturelles ("MERN"). A discount rate of 10% adjusted to reflect the risk inherent in the mining operation has been applied.

Assumptions based on the current economic environment have been made, which management believes are a reasonable basis upon which to estimate the future liability. These estimates are reviewed regularly to take into account any material changes to the assumptions. However, actual rehabilitation costs will ultimately depend upon future market prices for the necessary rehabilitation works required that will reflect market conditions at the relevant time.

The timing of rehabilitation is likely to depend on when the mine ceases to produce at economically viable rates. This, in turn, will depend upon future lithium prices, which are inherently uncertain.

Provision for Employee Benefits

Provision for employee benefits represents amounts accrued for annual leave.

	2022	2021
	\$	\$
NOTE 19: INTEREST BEARING BORROWINGS		
Non-convertible redeemable cumulative preference shares	27 23,461,533	-

(a) Preference Shares on issue are as follows:

Issued during the period:		
27 August 2021, issued as part of the settlement of the acquisition of North American Lithium (Note 5(A))	21,815,600	-
Interest accrued	926,642	-
Foreign currency translation movement	719,291	-
Balance at reporting date	23,461,533	-

On August 2021, as part of the acquisition of NAL by Sayona Quebec the Group exchanged Investissement Quebec (IQ)'s second ranking debt of C\$63M for NAL's 20,000,000 non-convertible redeemable cumulative preference shares a par value of C\$1.00.

These shares are classified as a non-current financial liability in the balance sheet. Interest is accrued or payable at 5% per annum. The shares may be redeemed at the option of NAL or at the option of IQ, subject to satisfaction of various performance hurdles. The shares cannot be converted to equity.

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Terms of the preference shares are detailed below:

- Preference shareholders are not entitled to dividends or to vote at shareholder meetings.
- In the event of default, liquidation, or receivership IQ rank before the ordinary shareholders in priority.
- Redemption commences in accordance with the NAL Constitution and Governance Agreement once a feasibility study regarding spodumene carbonate production is economically feasible and/or the mine is in commercial operation and the redemption term is up to 10 years after the first anniversary of the issue of these shares.
- Interest of A\$926,642 was accrued in year to 30 June 2022.

At 30 June 2022, the financial liability has been recorded at its issue price plus accrued interest. Given the nature and conditions impacting on potential redemption terms, the fair value assigned to the preference shares is their face value.

NOTE 20: OTHER FINANCIAL LIABILITIES

Non-Current

Royalty advances - at cost

	2022	2021
	\$	\$
27	11,503,791	-
	11,503,791	-

As part of 9451-6705 Quebec Inc's Moblan acquisition on 8 August 2021, royalty arrangements were entered into with LRC (Note 5(B)).

NOTE 21: OTHER LIABILITIES

Joint funding advances

	2022	2021
	\$	\$
	17,058,804	-
	17,058,804	-

(i) NAL Funding Advances:

At 30 June 2022, Piedmont Lithium Limited (PLL) had agreed to joint funding advances for the purposes of the NAL refurbishment. Although agreed, the C\$2.804M funds due by the end of June 2022 were not transferred to NAL until 12th July and have been reflected in the receivables at year end. The jointly funded advances included those outstanding receivables.

This loan from Piedmont Lithium Limited (PLL), which represents approximately 25% of the cash advances has been treated as an equity loan during the 2022 financial year.

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NOTE 22: ISSUED CAPITAL

	2022	2021
	\$	\$
8,246,752,670 (2021: 5,153,695,375) Fully paid ordinary shares	504,254,583	128,727,789
Ordinary shares issued during the year	No.	No.
Balance at the beginning of the reporting period	5,153,695,375	2,468,958,700
Shares issued during the prior year	-	2,684,736,675
Shares issued during the current year:		
9 July 2021, issue of shares on conversion of options at \$0.02	1,950,000	-
19 July 2021, placement of shares at \$0.075	423,631,222	-
20 July 2021, issue of shares on conversion of options at \$0.02	275,000	-
20 July 2021, issue of shares on conversion of options at \$0.03	58,140	-
28 July 2021, issue of shares on conversion of options at \$0.02	275,508	-
4 August 2021, issue of shares on conversion of options at \$0.03	1,744,186	-
4 August 2021, issue of shares on conversion of options at \$0.02	1,072,424	-
6 August 2021, issue of shares on conversion of options at \$0.02	242,648	-
6 August 2021, issue of shares on conversion of options at \$0.03	4,302,326	-
12 August 2021, issue of shares on conversion of options at \$0.02	197,675	-
12 August 2021, issue of shares on conversion of options at \$0.03	26,030,699	-
13 August 2021, issue of shares on conversion of options at \$0.02	1,000,000	-
13 August 2021, issue of shares on conversion of options at \$0.03	656,977	-
18 August 2021, issue of shares on conversion of options at \$0.02	850,000	-
18 August 2021, issue of shares on conversion of options at \$0.03	97,140	-
19 August 2021, issue of shares on conversion of options at \$0.0145	13,200,000	-
23 August 2021, placement of shares at \$0.0075	176,368,779	-
25 August 2021, issue shares under a Share Purchase Plan at \$0.0075	266,666,917	-
25 August 2021, placement of shares at \$0.0453	40,850,399	-
31 August 2021, issue of shares on conversion of options at \$0.02	5,830,993	-
31 August 2021, issue of shares on conversion of options at \$0.03	116,279	-
10 September 2021, issue of shares on conversion of options at \$0.02	3,720,663	-
10 September 2021, issue of shares on conversion of options at \$0.03	401,866	-
29 September 2021, issue of shares on conversion of options at \$0.02	26,539,634	-
29 September 2021, issue of shares on conversion of options at \$0.03	795,995	-
30 September 2021, issue of shares on conversion of options at \$0.02	1,234,847	-
6 October 2021, issue of shares on conversion of options at \$0.02	5,667,500	-
6 October 2021, issue of shares on conversion of options at \$0.03	860,000	-
11 October 2021, issue of shares on conversion of options at \$0.02	2,007,552	-
11 October 2021, issue of shares on conversion of options at \$0.03	755,814	-
11 October 2021, placement of shares at \$0.145	689,655,173	-
14 October 2021, placement of shares at \$0.15470	133,971	-
19 October 2021, issue of shares on conversion of options at \$0.02	11,604,902	-
19 October 2021, issue of shares on conversion of options at \$0.03	538,392	-
19 October 2021, issue placement at \$0.0145	3,279,401	-
27 October 2021, issue of shares on conversion of options at \$0.02	1,040,466	-
1 November 2021, issue of shares on conversion of options at \$0.02	15,902	-
1 November 2021, issue of shares on conversion of options at \$0.145	176,042,042	-
16 November 2021, issue of shares on conversion of options at \$0.02	1,050,000	-
16 November 2021, issue of shares on conversion of options at \$0.03	348,837	-
23 November 2021, issue of shares on conversion of options at \$0.02	194,820	-
6 December 2021, issue of shares on conversion of options at \$0.02	1,181,061	-
6 December 2021, issue of shares on conversion of options at \$0.03	925,000	-
6 December 2021, issue of shares on conversion of options at \$0.03	4,000,000	-
20 December 2021, issue of shares on conversion of options at \$0.02	800,000	-

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NOTE 22: ISSUED CAPITAL (Continued)

	2022	2021
	\$	\$
28 January 2022, issue of shares on conversion of options at \$0.02	1,063,879	-
28 January 2022, issue of shares on conversion of options at \$0.03	1,310,229	-
28 January 2022, placement of shares at \$0.1547	33,284	-
28 January 2022, issue of shares on conversion of options at \$0.02	2,313,745	-
28 January 2022, issue incentive shares at \$0.11	23,100,000	-
28 January 2022, issue incentive shares at \$0.11	15,533,420	-
11 February 2022, issue of shares on conversion of options at \$0.02	1,194,262	-
11 February 2022, issue of shares on conversion of options at \$0.03	465,875	-
2 March 2022, issue of shares on conversion of options at \$0.02	2,054,321	-
2 March 2022, placement of shares at \$0.1236	440,670	-
8 April 2022, issue of shares on conversion of options at \$0.02	29,954,876	-
8 April 2022, issue of shares on conversion of options at \$0.03	14,036,019	-
8 April 2022, issue of shares on conversion of options at \$0.04	2,000,000	-
14 April 2022, placement of shares at \$0.0607	22,631,142	-
21 April 2022, issue of shares on conversion of options at \$0.02	8,381,903	-
21 April 2022, issue of shares on conversion of options at \$0.03	187,840	-
29 April 2022, issue of shares on conversion of options at \$0.02	3,202,506	-
29 April 2022, issue of shares on conversion of options at \$0.03	174,419	-
12 May 2022, issue of shares on conversion of options at \$0.02	2,762,630	-
26 May 2022, issue of shares on conversion of options at \$0.02	5,306,265	-
26 May 2022, issue of shares on conversion of options at \$0.03	20,000	-
2 June 2022, placement of shares at \$0.18	1,054,406,346	-
23 June 2022, issue of shares on conversion of options at \$0.02	2,991,688	-
23 June 2022, issue of shares on conversion of options at \$0.03	1,280,826	-
	<u>8,246,754,692</u>	<u>5,153,695,375</u>

All share issues in the current period were for cash other than:

On 14 October 2021, 133,971 shares were issued at A\$0.1547 as part of a performance bonus of an Sayona Quebec Inc employee and were expensed to the Profit & Loss.

On 28 January 2022, 38,633,420 shares were issued at A\$0.11 in settlement of employee bonus entitlements, approved by shareholders at Annual General Meeting and were expensed to the Profit & Loss.

On 3 March 2022, 440,670 shares were issued at A\$0.1236 in settlement of an option payment to acquire a further interest in mineral tenements.

Ordinary shares participate in dividends and the proceeds on winding up of the parent entity in proportion to the number of shares held. At shareholders' meetings each ordinary share is entitled to one vote when a poll is called, otherwise each shareholder has one vote on a show of hands.

The Company does not have authorised capital or par value in respect of its issued shares.

Options on issue are as follows:

	2022	2021
	No.	No.
(i) Unlisted employee and officer options		
Balance at beginning of reporting period	8,000,000	8,000,000
Granted (Note 29)	40,000,000	-
Exercised	(6,000,000)	-
Expired	-	-
Balance at reporting date	<u>42,000,000</u>	<u>8,000,000</u>

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NOTE 22: ISSUED CAPITAL (Continued)

Employee and officer incentive options consist of:

2,000,000 options to acquire ordinary shares at A\$0.04 expiring on 29 November 2022. The options have been valued at A\$0.003 each, with A\$6,750 recognised in the reserves and charged to profit & loss in a prior period.

40,000,000 options to acquire ordinary shares at A\$0.15, expiring on 28 July 2023. The options have been valued at A\$0.04 each, with A\$1,600,000 recognised in the reserves and charged to profit & loss in the current period.

All options have vested.

	2022 No.	2021 No.
(ii) Listed options		
Balance at beginning of reporting period	474,857,645	182,716,433
Granted	-	195,593,766
Exercised	(166,567,127)	(10,610,596)
Expired	-	-
Transfer from unlisted options	-	107,158,042
Balance at reporting date	308,290,518	474,857,645

In May 2021, Sayona applied to list 107,158,042 previously unlisted options on the ASX. The options are exercisable at \$0.03 and expire 23 July 2022.

(iii) Other unlisted options

	2022 No.	2021 No.
Balance at beginning of reporting period	-	114,992,301
Granted during the period	13,200,000	66,666,666
Exercised during the period	(13,200,000)	(74,500,925)
Expired during the period	-	-
Transfer to listed options	-	(107,158,042)
Balance at reporting date	-	-

The Company issued 13,200,000 listed options to Jett Capital Advisors LLC for services provided.

Each of the options were exercisable at A\$0.0145 and were due to expire on 18 August 2024. The options were exercised on 19 August 2021. The options have been valued at A\$0.0138 each, with A\$1,370,161 recognised in the reserves and charged to share issue costs.

Capital management policy

Exploration companies such as Sayona Mining are funded by share capital during exploration and a combination of share capital and borrowings as they move into the development and operating phases of their business life.

Management controls the capital of the Group in order to maintain a sustainable debt to equity ratio, generate long-term shareholder value and ensure that the Group can fund its operations and continue as a going concern. The Group's debt and capital include ordinary share capital, preference shares and financial liabilities, supported by financial assets.

In the current year, the capital management strategy has included various new issues.

Management effectively manages the Group's capital by assessing the Group's financial risks and adjusting its capital structure in response to changes in these risks and in the market.

There are no externally imposed capital requirements.

There have been no changes in the strategy adopted by management to control the capital of the Group since the prior year.

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NOTE 23: RESERVES

Foreign currency translation reserve

The foreign currency translation reserve recorded exchange differences arising on translation of a foreign controlled subsidiary.

Options reserve

The options reserve records amounts recognised as expenses on valuation of employee share options.

NOTE 24: CASH FLOW INFORMATION

	2022	2021
	\$	\$
(a) Reconciliation of Cash Flow from Operations with profit/(loss) from Ordinary Activities after Income Tax:		
Profit/(loss) from ordinary activities after income tax	83,686,172	(4,379,498)
Non-cash flows in profit/(loss) from ordinary activities:		
Depreciation/amortisation	50,069	51,758
Share based payments - corporate costs	5,919,896	276,817
Unrealised foreign exchange transactions	(2,875,718)	321,781
Royalty Costs	2,169,752	-
Interest on Preference Shares	926,642	-
Write off capitalised exploration expenditure	-	(81,708)
Gain on Acquisition of NAL	(108,374,739)	-
Changes in operating assets and liabilities:		
(Increase)/Decrease in trade and other receivables	(3,962,089)	(10,180,888)
(Increase)/Decrease in other assets	(518,892)	(6,936)
(Decrease)/Increase in creditors and accruals	2,325,793	2,768,301
(Decrease)/Increase in provisions	199,121	55,254
Cash flows from operations	<u>(20,453,993)</u>	<u>(11,175,119)</u>

(b) Non-cash Financing and Investing Activities

In the 2022 financial year the following non-cash financing and investing transactions occurred:

- Issue of 133,971 shares valued at A\$20,725 as an employee performance bonus - M Ratte.
- Issue of 13.2M options to Jett Capital Inc, valued at A\$1,370,160 in settlement of services provided.
- Issue of 23.1M shares to B Lynch valued at A\$2,541,000. Approved by shareholders at Annual General Meeting.
- Issue of 40M options to KMP valued at A\$1.6M. Approved by shareholders at Annual General Meeting.
- Issue of 15,533,420 shares to employees valued at A\$1,708,676. Approved at Annual General Meeting.
- Issue of 4,894,986 performance rights to employees valued at A\$702,200. Approved at Annual General Meeting.
- Issue of 440,670 shares to Exiro Mineral Corporation - Tansim final tenant payment valued at A\$54,467. Approved at Annual General Meeting.

(c) Changes in liabilities from financing activities

	Other Financial Liabilities	Preference Shares	Lease liabilities	Total
Balance 30 June 2021	-	-	52,764	52,764
Cash Flows	11,503,791	2,181,560	(42,524)	13,642,827
Non-cash movements	-	23,461,533	-	23,461,533
Accrued Interest	-	926,642	-	926,642
FX Translation Movement	-	719,291	-	719,291
Balance 30 June 2022	<u>11,503,791</u>	<u>27,289,026</u>	<u>10,240</u>	<u>38,803,057</u>

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NOTE 25: RELATED PARTY TRANSACTIONS

(a) The Group's main related parties are as follows:

Key Management Personnel
Morella Corporation Limited
Piedmont Lithium Limited

Any persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including any director (whether executive or non-executive) of the Group, are considered key management personnel (see Note 6).

Morella Corporation Limited is considered a related party due to common directors.

(b) Transactions with related parties:

Transactions between related parties are on normal commercial terms and conditions, no more favourable than those available to other parties unless otherwise stated.

During the year, the parent entity engaged a related party of Paul Crawford to provide accounting services and they were paid A\$49,400.

During the year, the parent entity engaged Shazo Holdings Pty Ltd, an entity controlled by Mr Allan Buckler, a director of the Company, to provide directorial and exploration technical services. Fees of A\$72,000 were incurred during the year (2021: A\$72,000).

During the period, the Group entered into a Earn-In Agreement for its Pilbara lithium tenement portfolio with Morella Limited (formerly known as Altura Mining Limited). Morella had not earned any interest in the tenements.

Under the earn-in agreement, Morella Corporation is to spend A\$1.5m on exploration over three years to earn a 51% interest in lithium leases.

NOTE 26: COMMITMENTS

(a) Exploration commitments

The entity must meet minimum expenditure commitments on granted exploration tenements to maintain those tenements in good standing. If the relevant mineral tenement is relinquished the expenditure commitment also ceases.

The following commitments exist at balance date but have not been brought to account.

	2022	2021
	\$	\$
Not later than 1 year	1,484,651	1,051,848
Between 1 year and 5 years	2,327,555	312,440
Total commitment	<u>3,812,206</u>	<u>1,364,288</u>

Under the earn-in agreement with Morella Corporate (formerly Altura Mining Limited) (refer Note 33), exploration amounts paid will be applied to meet some of the above exploration commitments. The Earn-In Agreement does not include all tenements which the Group currently controls, consequently, the Group will be responsible for the other tenements.

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NOTE 26: COMMITMENTS (Continued)

(b) NAL commitments

On May 22, the Company announced its commitment to a A\$110M (\$C98M) refurbishment of NAL processing facility. The planned restart is well advanced, targetting completion by end of first quarter 2023 - March 2023. The refurbishment and upgrade will be funded from existing cash reserves.

NOTE 27: FINANCIAL RISK MANAGEMENT

The Group's financial instruments mainly comprises cash balances, receivables, payables, leases and preference shares. The main purpose of these financial instruments is to provide finances for group operations.

The totals for each category of financial instruments, measured in accordance with AASB 139: Financial Instruments: Recognition and Measurement as detailed in the accounting policies to these financial statements are detailed in the table outlining financial instruments composition and maturity analysis in part (b) below.

Financial Risk Management Policies

The Board of the Company meets on a regular basis to analyse exposure and to evaluate treasury management strategies in the context of the most recent economic conditions and forecasts.

The Board has overall responsibility for the establishment and oversight of the Company's risk management framework. Management is

Specific Financial Risk Exposures and Management

(a) Credit Risk

Credit risk arises from exposures to deposits with financial institutions, trade and other debtors and deposits and sundry receivables (Notes 9,10 and 11).

Credit risk is managed and reviewed regularly by the Board. The Board monitors credit risk by actively assessing the rating quality and liquidity of counter parties.

The carrying amount of cash and receivables recorded in the financial statements represent the Group's maximum exposure to credit risk. Concentration of credit risk is set out in Note 10.

(b) Liquidity Risk

Liquidity risk is the risk that the Group will not be able meet its financial obligations as they fall due. This risk is managed by ensuring, to

The Board manages liquidity risk by sourcing long-term funding, primarily from equity sources.

Financial liability and financial asset maturity analysis

The table below reflects an undiscounted contractual maturity analysis for financial assets and financial liabilities and reflects management's expectations as to the timing of termination and realisation of financial assets and liabilities.

SAYONA MINING LIMITED AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 27: FINANCIAL RISK MANAGEMENT (continued)

Consolidated Group	1 year or less	1 to 5 years	More than 5 years	Total
2022	\$	\$	\$	\$
Financial assets				
Cash and cash equivalents (i)	184,559,499		-	184,559,499
Other assets - rehabilitation deposits (v)	-	13,120,369	-	13,120,369
Receivables (ii)	9,680,669	-	-	9,680,669
	<u>194,240,168</u>	<u>13,120,369</u>	<u>-</u>	<u>207,360,537</u>
Financial liabilities				
Payables (ii)	6,921,952	-	-	6,921,952
Interest bearing borrowings (iii)	-	-	23,461,533	23,461,533
Other financial liabilities - royalty advances (ii)	-	-	11,503,791	11,503,791
Lease liability (iv)	10,240	-	-	10,240
	<u>6,932,192</u>	<u>-</u>	<u>34,965,324</u>	<u>41,897,516</u>
Net cash flow on financial instruments	<u>187,307,976</u>	<u>13,120,369</u>	<u>(34,965,324)</u>	<u>165,463,021</u>
2021	\$	\$	\$	\$
Financial assets				
Cash and cash equivalents (i)	35,502,596	-	-	35,502,596
Receivables (ii)	10,412,500	-	-	10,412,500
	<u>45,915,096</u>	<u>-</u>	<u>-</u>	<u>45,915,096</u>
Financial liabilities				
Payables (ii)	3,665,560	-	-	3,665,560
Lease Liability (iv)	37,540	15,224	-	52,764
	<u>3,703,100</u>	<u>15,224</u>	<u>-</u>	<u>3,718,324</u>
Net cash flow on financial instruments	<u>42,211,996</u>	<u>(15,224)</u>	<u>-</u>	<u>42,196,772</u>

(i) Floating interest with a weighted average effective interest rate of 0.06% (2021: 0.10%).

(ii) Non-interest bearing.

(iii) Incremental borrowing rate 5.0%

(iv) Incremental borrowing rate 4.5%

(v) Rehabilitation deposits 0.67%

(c) **Market Risks**

(i) **Interest Rate Risk**

The Group's exposure to interest rate risk, which is the risk that a financial instrument's value will fluctuate as a result of changes in market interest rates, arises in relation to the company's bank balances.

This risk is managed through the use of variable rate bank accounts.

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 27: FINANCIAL RISK MANAGEMENT (Continued)

(ii) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from currency movements, primarily in respect of the Canadian and US Dollar. No derivative financial instruments are employed to mitigate the exposed risks. Risk is reviewed regularly, including forecast movements in these currencies by the senior executive team and the Board.

These foreign exchange risks arose from

- Cash held in Canadian and US dollars.
- Canadian and US dollar denominated receivables and payables.
- Canadian denominated preference shares.

The Group's exposure (in A\$) to foreign currency risk at the reporting date was as follows:

	CAD 2022 \$	USD 2022 \$
Cash and cash equivalents	25,270,638	1,093,826
Receivables	11,055,370	-
Deposits	11,659,731	-
Payables	(5,384,641)	-
Interest bearing borrowings	(20,849,655)	-
Other liabilities	(15,159,716)	-
Other financial liabilities	(10,223,120)	-
Net exposure	(3,631,393)	1,093,826
	CAD 2022 \$	USD 2022 \$
Cash and cash equivalents	145,413	14,079,247
Receivables	4,553,595	-
Payables	(2,223,723)	-
Net exposure	2,475,285	14,079,247

(d) Sensitivity analysis

If the spot Australian Dollar rate strengthened/weakened by 5 percent against the US Dollar, with all other variables held constant, the Group's post-tax result for the year would have been increased/decreased by A\$54,904 (2021 +/- A\$704,036).

If the spot Australian Dollar rate strengthened/weakened by 5 percent against the Canadian Dollar, with all other variables held constant, the Group's post-tax result for the year would have been increased/decreased by A\$347,705 +/- (2021: A\$130,721).

The Group has performed sensitivity analysis relating to its exposure to interest rate risk. At year end, the effect on profit and equity as a result of a 1% change in the interest rate, with all other variables remaining constant would be +/- A\$1,843,561 (2021: A\$355,025).

(e) Fair Values

The aggregate fair values and carrying amounts of financial assets and liabilities are disclosed in the statement of financial position and notes to the financial statements. Fair values are materially in line with carrying values, due to the short term nature of all these items, with the exception of preference shares which have a carrying amount of A\$23,461,533 and a fair value of A\$22,344,317 (2021: A\$nil).

NOTE 28: CONTINGENT LIABILITIES

There were no material contingent liabilities at the end of the reporting period.

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 29: SHARE BASED PAYMENTS

Options

The following options were issued during the year.

On 18 August 2021, 13,200,000 unlisted options were issued to Jett Capital Advisors LLC for services provided. Each option is exercisable at A\$0.0145 and were due to expire on 18 August 2024. Options were exercised during the period.

On 28 January 2022, 40,000,000 unlisted options were issued to Directors of the Company following shareholder approval. Each option is exercisable at A\$0.15 and expire on 28 July 2023.

During the year, 6,000,000 unlisted employee options were exercised.

On 28 January 2022, 4,894,986 performance rights were issued to employees of the Group following shareholder approval. Each right is exercisable at zero value and expire on 27 January 2024.

Options issued are summarised as:	2022		2021	
	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price
	No	\$	No	\$
Outstanding at beginning of the year	52,145,173	0.022	33,295,564	0.022
Granted	58,094,986	0.107	90,385,416	0.015
Forfeited	-	-	-	-
Exercised	(20,918,750)	(0.019)	(71,535,807)	0.013
Expired	-	-	-	-
Outstanding at period end	89,321,409	0.078	52,145,173	0.022
Exercisable and vested at year end	89,321,409	0.078	52,145,173	0.022

Shares

The following shares were issued during the year:

Issue of 133,971 shares valued at A\$20,725 as an employee performance bonus.

Issue of 38,633,420 shares valued at A\$4,249,676 in settlement of employee bonus entitlements, approved by shareholders at Annual General Meeting.

Issue of 440,670 shares valued at A\$54,467 in settlement of an option payment to acquire a further interest in mineral tenements.

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NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2022

NOTE 30: EVENTS AFTER BALANCE DATE

Key events since the end of the financial year have been:

On 29 July 2022, the listed option securities exercisable at A\$0.03 each expired. Of the 52,201,664 options on issue at 30 June 2022, 47,432,492 were exercised subsequent to year end and the balance of 2,750,795 expired unexercised.

On 25 July 2022, Sayona, Morella Corporation and Lithium Royalty Corp (LRC) agreed to binding terms for a royalty on lithium products produced from both the Mt Edon lithium project, tenements E59/2092 and E59/2055 and the Tabba Tabba lithium project, tenement E45/4703.

In consideration for the grant of a 1.25% Gross Overriding Revenue royalty on the Mt Edon project, LRC will pay Morella an initial sum of US\$450,000 with a further US\$100,000 payable if a Mineral Resource estimate is declared with a minimum 5 Mt and 1% Li₂O grade.

In consideration for the grant of a 1.25% Gross Overriding Revenue royalty on the Tabba Tabba project, LRC will pay Morella an initial sum of US\$650,000 with a further US\$350,000 payable if a Mineral Resource estimate is declared with a minimum 5 Mt and 1% Li₂O grade.

The initial LRC royalty funding will be used in the development of the Western Australian projects with a view to delineating a maiden JORC resource.

On 5 August 2022, the Company increased the current Controlled Placement Agreement limit of A\$15M to a new limit of A\$200M and to extend the expiry date to 31 July 2025. The agreement, provides the Group with standby equity capital of up to A\$200M over the period to 31 July 2025. Under the agreement, the Company issued 95M shares in June 2021 as collateral. These shares were issued at no cost and are similar to treasury shares. The collateral shares are cancellable at any time by Sayona for no consideration. The collateral shares may be applied by Sayona to meet any share issues under the agreement when subscription monies are received. Sayona receives 90% of subscription monies with the remaining 10% retained by the subscriber. PLL have agreed that the advances for NAL can be converted to equity.

On 27 September 2022, the Group announced that the Group awarded a four-year, approximately C\$200 million contract to Québec company L. Fournier & Fils for mining operations in relation to the restart and ongoing production at its North American Lithium (NAL) operation.

On 4 October 2022, the Group announced the launch of a PFS to consider the potential for lithium carbonate production at the NAL operation. This will be undertaken in conjunction with its partner, Piedmont. Major engineering firm Hatch will undertake the lithium carbonate PFS, targeting completion by March 2023, in line with the recommencement of spodumene concentrate production at NAL.

On 5 October 2022, the Group announced a PFS for Moblan, targeting the development of a lithium mine and concentrator in northern Québec. Québec company, InnovExplo, will conduct the PFS, targeting completion by May 2023. This is expected to be followed by a definitive feasibility study, with a target completion date of September 2023 and will spur the development of a new northern hub for the Company. The study will examine the development of a mine and concentrator north of Chibougamau, near Mistissini, with the Moblan project serving as the centre of Sayona's northern lithium hub, including the emerging Lac Albert Project.

On 18 October 2022, the Group announced that the Group awarded an approximately C\$43 million contract to Québec company, Solurail Logistique Inc, to transport spodumene concentrate from the NAL operation to port. The contract includes the rental of 110 rolling stock (railway vehicles), with the equipment to be made available for the restart of NAL production in Q1 2023.

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On 14 November 2022, the Company announced a strategic acquisition and earn-in agreement with Jourdan Resources Inc (TSXV:JOR) over its adjacent Vallée Lithium Project. This provides the opportunity to potentially swiftly expand the NAL resource base and potentially future mine production capacity.

The Vallée project comprises 48 claims covering around 1,997 ha, closely neighbouring the NAL mine tenure with 20 claims located within 500m of the mine boundary. In comparison, NAL's 19 claims cover some 582 ha.

Under the agreement, Sayona subsidiary NAL will acquire 20 claims outright, spanning 755.3 ha, providing an immediate extension to the NAL tenement area and allowing for potential future infrastructure expansion at the NAL mine and its processing facility. Exploration targets are located close to and along strike from the NAL orebody.

NAL also has the right to earn up to a 51% stake in the Vallée project's remaining 28 claims, covering 1,241.57 ha. NAL can earn up to 50% equity by spending C\$4 million within the first year to earn a 25% equity stake and an additional C\$6M within two years to earn a further 25%. A further 1% equity is available if Sayona prepares a feasibility study and arranges funding for the construction of a mine at Vallée.

Sayona will aim to treat any ore obtained within the earn-in area at its NAL operation, with NAL and Jourdan forming a joint venture to develop the Vallée project and its potential integration into NAL.

Sayona's Québec subsidiary also acquired a 9.99% shareholding in Jourdan through a private placement for approximately C\$1.5 million and has the right to appoint a director on Jourdan's board.

On 17 November 2022, Sayona announced the acquisition of an addition 1,824 claims covering 985 square kilometres directly adjacent to the Moblan Project under an agreement with Troilus Gold Corp. (TSX:TLG). The claim area is more than 200 times the size of the existing Moblan project.

Under the agreement, Sayona Mining's Canadian subsidiary Sayona Inc. has acquired a 100% interest in the claims, which have not been extensively explored for lithium and offer potential for eastwards extensions to the Moblan mineralisation, as well as regional targets in the emerging lithium district. Sayona paid C\$40 million worth of SYA stock (184m shares) as consideration for the claims.

Concurrently with the claims acquisition, Sayona agreed to subscribe for approximately C\$4.8 million worth of common shares of Troilus on a non-brokered private placement basis, bringing Sayona's investment in Troilus to approximately 9.26%. Troilus will also receive a 2% net smelter return royalty ("NSR") on all mineral products from the acquired claims. In total, Sayona has paid C\$10million for Troilus common shares, representing 9.26% ownership, through subscription for 10.5million shares at C\$0.49 per share.

Sayona has the right to invest in future financings to maintain its pro-rata ownership of Troilus stock, as long as it holds at least 5% ownership in Troilus.

On 24 November 2022, the Company issued 155m shares as collateral under the revised \$200m limit of the Controlled Placement Agreement. These shares were issued at no cost and are similar to treasury shares. The collateral shares are cancellable at any time by Sayona for no consideration. The collateral shares may be applied by Sayona to meet any share issues under the agreement when subscription monies are received. Sayona receives 90% of subscription monies with the remaining 10% retained by the subscriber. PLL have agreed that the advances for NAL can be converted to equity.

On 20 December 2022, Morella Corporation Limited (ASX:IMC) gave notice to Sayona that it had completed its earn-in requirements under the farm-in agreement with Sayona. Morella has expended over \$1.5m within the three year period as required under the agreement.

Both parties will now enter a formal Joint Venture agreement, with Morella being manager and holding a 51% equity stake and Sayona 49%. The JV comprises lithium rights to six tenements in the Pilbara (covering 545 sq km) and two tenements in the South Murchison (covering 48 sq km). Sayona may elect to contribute pro-rata to JV exploration in order to maintain its equity, or choose to dilute.

There have been no other key events since the end of the financial year.

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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 31: JOINT ARRANGEMENTS

Joint arrangements are in the form of options to acquire mineral tenements or joint venture agreements.

The Group has entered into joint arrangements with the following parties:

Sayona Lithium Pty Ltd

The Group holds an 80% interest in the Western Australian mineral tenement E59/2092 (Mt Edon) at 30 June 2022. Under the agreement, the vendor is entitled to receive a 1% gross production royalty and is entitled to explore for and develop other non-lithium commodity within the tenement during the option period.

During the period, the Group entered into a revised Earn-In Agreement for its Pilbara lithium tenement portfolio with Morella Corporation Limited (formerly known as Altura Mining Limited). Morella had not earned any interest in the tenements as at 30 June 2022.

Sayona Quebec Inc.

On 28 February 2019, the Group entered into an acquisition agreement with Exiro Minerals Group in relation to a number of mineral claims in Quebec.

All conditions have been met and the Group now holds 100% interest in the relevant claims.

Sayona Nord Inc.

On 15 October 2021, the Group acquired a 60% interest in the Moblan Lithium Project for US\$86.5M. Moblan is 40% owned by SOQUEM Inc., a wholly owned subsidiary of Investissement Québec.

NOTE 32: PARENT ENTITY INFORMATION

The following information relates to the parent entity, Sayona Mining Limited. This information has been prepared using consistent accounting policies as presented in Note 1.

	2022	2021
	\$	\$
Current assets	171,161,455	39,468,941
Non-current assets	266,902,636	30,786,336
Total assets	<u>438,064,091</u>	<u>70,255,277</u>
Current liabilities	(1,487,695)	2,119,839
Non-current liabilities	-	32,635
Total liabilities	<u>(1,487,695)</u>	<u>2,152,474</u>
Net Assets	<u>439,551,786</u>	<u>68,102,803</u>
Contributed equity	504,254,582	128,727,789
Option Reserve	1,761,827	108,953
Accumulated losses	(66,464,623)	(60,733,939)
Total equity	<u>439,551,786</u>	<u>68,102,803</u>
Statement of Profit or Loss and Other Comprehensive Income		
Total (profit)/loss for the year	10,061,636	(2,315,467)
Total other comprehensive income	-	-
Total comprehensive loss for the year	<u>10,061,636</u>	<u>(2,315,467)</u>

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NOTES TO THE FINANCIAL STATEMENTS
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Guarantees

There are no parent company guarantees.

Contingent Liabilities

There are no material contingent liabilities at the end of the reporting period.

NOTE 33: INTERESTS IN SUBSIDIARIES

Information about principal subsidiaries

** Sayona Lithium Pty Ltd, incorporated in Australia on 4 September 1986. The parent entity holds 100% of the ordinary shares of the entity.

** Sayona East Kimberley Pty Ltd, incorporated in Australia on 18 June 2015. The parent entity holds 100% of the ordinary shares of the entity.

** Sayona International Pty Ltd, incorporated in Australia on 29 April 2016. The parent entity holds 100% of the ordinary shares of the entity.

Sayona Quebec Inc, incorporated in Canada on 7 July 2016. The parent entity held 100% of the ordinary shares of the entity. On 8 June 2021, Piedmont subscribed for US\$5M worth of shares in Sayona Quebec to acquire a 25% interest.

Lithium Amerique Du Nord Inc (North American Lithium Inc), incorporated in Canada on 9th June 2021. Sayona Quebec Inc held 100% of the ordinary shares of the entity.

Development capital, future operating costs and working capital requirements of Sayona Quebec Inc. and North American Lithium inc. will be jointly funded by Sayona 75% and Piedmont 25%.

9451-6705 Quebec Inc, incorporated in Canada on 8th October 2021. The parent entity holds 100% of the ordinary shares of the entity.

Sayona Nord Inc, incorporated in Canada on 24th September 2021. 9451-6705 Quebec Inc owns 100% of the ordinary shares of the entity.

NOTE 33: INTERESTS IN SUBSIDIARIES (Continued)

These subsidiaries have share capital consisting solely of ordinary shares which are held directly by the Group and minority interests.

There are no significant restrictions over the Group's ability to access or use assets and settle liabilities of the Group.

Each subsidiary's principal place of business is also its country of incorporation, and year end coincide with the parent company.

*** members of the Australian tax consolidated group*

SAYONA LIMITED AND CONTROLLED ENTITIES AND CONTROLLED ENTITIES
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NOTES TO THE FINANCIAL STATEMENTS
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NOTE 34: SEGMENT REPORTING

The Group operates internationally, in the mineral exploration industry. Segment reporting is based on the whole of entity. Geographical segment information is as follows:

Primary Reporting: Geographical Segments

	Australia		Overseas		Consolidated Group	
	2022	2021	2022	2021	2022	2021
	\$	\$	\$	\$	\$	\$
REVENUE						
Revenue	114,509	644,591	383,709	796	498,218	645,387
Total revenue from ordinary activities	114,509	644,591	383,709	796	498,218	645,387
RESULT						
Profit/(loss) from ordinary activities before income tax expense	(10,203,472)	(2,952,535)	93,889,644	(346,326)	83,686,172	(4,379,498)
Income tax expense	-	-	-	-	-	-
Profit/(loss) from ordinary activities after income tax expense	(10,203,472)	(2,952,535)	93,889,644	(346,326)	83,686,172	(4,379,498)
ASSETS						
Segment assets	174,324,897	40,969,047	486,836,708	30,752,276	661,161,605	71,721,323
LIABILITIES						
Segment liabilities	47,530,487	(1,557,110)	(137,896,233)	(2,278,086)	(90,365,746)	(3,835,196)

There were no transfers between segments reflected in the revenues, expenses or result above. The pricing of any intersegment transactions is based on market values.

Segment accounting policies are consistent with the economic entity.

NOTE 35: FAIR VALUE MEASUREMENT

Apart from software intangibles, the Group does not measure any assets or liabilities at fair value on a recurring basis after

The Group does not subsequently measure any other assets or liabilities at fair value on a non-recurring basis.

NOTE 36: COMPANY DETAILS

The registered office and principal place of business is:

Sayona Mining Limited
 Level 28, 10 Eagle Street
 10 Eagle Street
 Brisbane Queensland 4000

Independent Auditor's Report**To the Shareholders and Board of Directors of Sayona Mining Limited****Report on the Audit of the Financial Report***Opinion*

We have audited the accompanying consolidated financial statements of Sayona Mining Limited (the Company and its controlled entities (the Group)), which comprise the consolidated statement of financial position as at June 30, 2022, the consolidated statements of profit and loss and other comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Group as of June 30, 2022, and the results of its operations and cash flows for the year then ended in conformity with Australian Accounting Standards and Interpretations of the Australian Accounting Standards Board and International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are required to be independent of the Group and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key Audit Matters

Key audit matters are those that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Nexia Brisbane Audit Pty Ltd

Registered Audit Company 299289
Level 28, 10 Eagle Street
Brisbane QLD 4000
GPO Box 1189
Brisbane QLD 4001
p +61 7 3229 2022
f +61 7 3229 3277
e email@nexiabrisbane.com.au
w nexia.com.au

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Independent Auditor’s Report to the Shareholders and Board of Directors of Sayona Mining Limited (continued)

Key audit matter	How the matter was addressed in the audit
<p>Acquisition of NAL mine - accounting and fair values</p> <p>Refer to Note 5(A) Significant transactions and events - Business Combination - NAL Acquisition</p> <p>On August 27, 2021 the Group acquired the issued capital of North American Lithium Inc. (NAL) for a purchase price of A\$128.6M. This was an acquisition of a previously operating mine in Quebec Canada which was in the possession of the Canadian government.</p> <p>As disclosed in Note 5(A) this acquisition has been accounted for as a business combination under AASB/IFRS 3 <i>Business Combinations</i>. The note indicates this is a key estimate in preparation of the financial statements, as the current accounting treatment and fair values reflect the complexity of the transaction and the re-commissioning of the mine site.</p> <p>In the financial statements the Group has recorded at fair value for the acquisition total assets of \$267.8M, total liabilities of \$30.8M, and a gain on acquisition of \$108.4M.</p> <p>The accounting for the acquisition was considered a key audit matter due to the estimates required to account for the acquisition as a business combination, the estimates required to measure the fair values of the assets and liabilities acquired, and due to the significant amounts involved.</p>	<p>Our procedures included, amongst others:</p> <ul style="list-style-type: none"> • We obtained an understanding of the acquisition by examining relevant agreements, legal documents and purchase price allocation reports, to obtain an understanding of the transaction; • We obtained an understanding of the operational status of the mine site by examining relevant documents for the mine recommissioning and mine operating plans; • We assessed whether the acquisition constituted a business combination under AASB/IFRS 3 <i>Business Combinations</i>; • We obtained and evaluated the external valuation report to assess the determination of the fair values of the assets and liabilities acquired; • We evaluated the competency and independence of management’s experts used in their assessment of the mine recommissioning and mine operating plans, and the fair values adopted; • We tested the calculation of the gain on bargain purchase arising from the acquisition; • We considered the key assumptions and estimates used by management to apply AASB/IFRS 3 <i>Business Combinations</i>; and • We assessed the appropriateness of disclosures of the acquisition included in the notes to the financial statements.

**Independent Auditor's Report to the Shareholders and Board of Directors of
Sayona Mining Limited (continued)**

Key audit matter	How the matter was addressed in the audit
<p>Joint Arrangements - Moblan Lithium Project</p> <p>Refer to Note 5(B) Significant transactions and events - Moblan Lithium Project</p> <p>In October 2021 the Group acquired a 60 % interest in tenements known as the 'Moblan Lithium Project' for a purchase price of A\$116.7M and transaction costs of A\$1.35M were incurred. The Group will manage the project on behalf of the joint holders.</p> <p>The accounting for the acquisition of the project was considered a key audit matter due to the significant amount involved in the transaction.</p>	<p>Our procedures included, amongst others:</p> <ul style="list-style-type: none"> • We obtained an understanding of the acquisition by examining relevant agreements and legal documents; • We obtained evidence as to the rights to tenure of the areas of interest acquired; • We obtained evidence of the future intention for the areas of interest, including reviewing future budgeted expenditure and related work programs; • We obtained an understanding of the status of ongoing exploration programs, for the areas of interest; • We obtained evidence as to the assumptions made by management in the determination of the recoverable value of the asset; and • We assessed the appropriateness of disclosures of the acquisition of the included in the notes to the financial statements.
<p>Carrying Value of Exploration and Evaluation Assets</p> <p>Refer to Note 14 Exploration and Evaluation Assets</p> <p>As at June 30, 2022 the carrying value of exploration and evaluation assets is \$158.9M. The Group's accounting policy in respect of exploration and evaluation assets is outlined in Note 1.</p> <p>This is a key audit matter as this is a significant asset of the Group and due to the significant judgement that is applied in determining whether the capitalised exploration and evaluation assets meet the recognition criteria set out in AASB/IFRS 6 <i>Exploration for and Evaluation of Mineral Resources</i>.</p>	<p>Our procedures included, amongst others:</p> <ul style="list-style-type: none"> • We obtained evidence as to whether the rights to tenure of the areas of interest remained current at reporting date as well as confirming that rights to tenure are expected to be renewed for tenements that will expire in the near future; • We obtained evidence of the future intention for the areas of interest, including reviewing future budgeted expenditure and related work programs; • We obtained an understanding of the status of ongoing exploration programs, for the areas of interest; • We obtained evidence as to the assumptions made by management in the determination of the recoverable value of the asset; and • We assessed the appropriateness of disclosures included in the notes to the financial statements.

Independent Auditor's Report to the Shareholders and Board of Directors of Sayona Mining Limited (continued)

Responsibilities of Directors for the Consolidated Financial Statements

The directors are responsible for the preparation and fair presentation of the financial statements in accordance with Australian Accounting Standards and International Financial Reporting Standards, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Group's ability to continue as a going concern for one year after the reporting date.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Group's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matter - Prior Period Financial Information not Covered by this Audit Report

The prior period financial statements were not audited under GAAS audit procedures. We conducted our prior period audit of the financial statements in accordance with Australian Auditing Standards which are compliant with International Auditing Standards.

Nexia Brisbane Audit Pty Ltd.

Nexia Brisbane Audit Pty Ltd

Ann-Maree Robertson.

**Ann-Maree Robertson
Director**

Level 28, 10 Eagle Street
Brisbane, Queensland, Australia, 4000.

Date: February 26, 2023

