Altius Minerals Corporation

Management's Discussion and Analysis of Financial Conditions and Results of Operations

Year ended December 31, 2022

This Management's Discussion and Analysis ("MD&A") should be read in conjunction with the Corporation's consolidated financial statements for the year ended December 31, 2022 and related notes. This MD&A has been prepared as of March 7, 2023.

Management's discussion and analysis of financial condition and results of operations contains forward–looking statements. By their nature, these statements involve risks and uncertainties, many of which are beyond the Corporation's control, which could cause actual results to differ materially from those expressed in such forward-looking statements. Readers are cautioned not to place undue reliance on these statements. The Corporation disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Additional information regarding the Corporation, including the Corporation's continuous disclosure materials, is available on the Corporation's website at www.altiusminerals.com or through the SEDAR website at www.sedar.com.

Description of Business

The Corporation manages its business under three operating segments, consisting of (i) the acquisition and management of producing and development stage royalty and streaming interests ("Mineral Royalties"), (ii) the acquisition and early stage exploration of mineral resource properties with a goal of vending the properties to third parties in exchange for early stage royalties and minority equity or project interests ("Project Generation") and (iii) its majority interest holding in publicly traded Altius Renewable Royalties Corp. (TSX: ARR) ("ARR"), which is focused on the acquisition and management of renewable energy investments and royalties ("Renewable Royalties").

The Corporation's diversified mineral royalties and streams generate revenue from 11 operating mines located in Canada (9), the United States (1), and Brazil (1) that produce copper, nickel, cobalt, potash, iron ore and thermal (electrical) coal. See Appendix 1: Summary of Producing Royalties and Streaming Interests. It holds royalty interests in 3 construction stage lithium mines. The Corporation further holds a diversified portfolio of pre-production stage royalties and junior equity positions that it mainly originates through mineral exploration initiatives within its Project Generation business division.

The Corporation holds a 58% interest in ARR, which through a jointly controlled entity, Great Bay Renewables LLC ("GBR") holds a portfolio of royalties related to renewable energy generation projects located primarily in the United States that includes 10 operating assets, one under construction and several additional development stage projects. Certain funds managed by affiliates of Apollo Global Management, Inc. (the "Apollo Funds") represent the other party to the joint venture.

Additional information on the status of these royalty interests is available in Appendix 2: Summary of Exploration and Pre-Production Stage Royalties and Appendix 3: Summary of Operational, Construction and Development Renewable Energy Royalties of this MD&A.

Strategy

The Corporation's broader strategy is to grow a diversified portfolio of long-life royalties related to assets and commodities that support established, sustainability linked, macro-scale structural trends that include as our pillars: the growth of agricultural yield requirements; electrification metals demand growth; the transition from fossil fuel to renewable based electrical generation; and the evolution of steel-making towards lower emissions based processes.

The Corporation particularly seeks royalty interests in projects with long resource lives in order to maximize the potential for future option value realization. Extensive resource lives are considered by the Corporation as excellent predictors of project life extensions and production rate expansions. Such occurrences typically require capital investments by the operators, but as a royalty holder Altius pays no share of the costs incurred to gain these potential incremental benefits. In addition, long life assets provide exposure to multiple commodity cycles and to general and industry specific inflationary impacts on production and development costs over time, to which the Corporation is not exposed, which naturally result in higher nominal commodity prices. The long average resource lives that remain for most of our royalty portfolio is a key strategic differentiator for Altius within the broader natural resource royalty sector that it believes will lead to higher, embedded, long-term investment returns and asset value growth.

Altius also grows its portfolio of Mineral Royalties by originating and adding value to mineral projects through scientific research, exploration and environmental/social licensing initiatives and then retaining royalties upon their sale or transfer to mining/development companies. This is the core function of our Project Generation business, which has a strong track record of internally creating pipeline royalties as well as earning substantial profits from the eventual monetization of corporate equity interests that are often received in addition to the long-term retained royalty interests. The Corporation believes that the royalties it creates internally can provide higher long-term investment rates of return and complement those gained through acquisition related activity. This represents another unique strategic differentiator for Altius.

Whether considering its organic Project Generation business or M&A based mineral royalty acquisitions, Altius exercises counter-cyclical discipline. Commodity markets are notoriously cyclical and volatile and individual asset valuations can change dramatically in accordance with short-term commodity price and sentiment fluctuations. Our mining royalty and mineral property acquisitions have been most active during periods of low cyclical valuations, while operator funded organic growth investments and equity gains/liquidity events typically become more pronounced during periods of better cyclical valuation and sentiment.

Altius has also expanded its focus into royalty financing of the renewable energy sector with its founding 58% ownership interest in ARR, which provides direct exposure to the global transition towards cleaner energy sources. Through investments in US-based utility-scale wind and solar project developers and operators ARR has begun building a diversified portfolio of renewable energy royalty interests that currently represent a combined potential nameplate capacity in excess of 8,000 Megawatts (see Appendix 3 of this MD&A) of power generation.

Outlook

General

Most of the commodity prices that are relevant to Altius remain subdued due to inflation driven recessionary type fears that are negatively impacting the near-term demand forecasts of many industry commentators. While this is somewhat at odds with the apparent supply shortages and market tightness that many producers are noting, particularly in potash where total global demand will not be met this coming year, and in copper where inventories are near all-time lows, a relatively pessimistic short-term sentiment currently prevails. In most cases prices remain below the increasing levels that we believe are required to incentivize investment in much needed replacement and new supply capacity, which may slow the pace of advancement for development stage projects in our portfolio. More broadly however, we believe that any capital investment hesitancy will be a further bullish driver of medium to longer term, large-scale supply deficits, and potentially much higher prices, in coming periods for several of our key commodities.

Also, as a royalty business, Altius's exposures are predominantly revenue based and therefore benefit strongly from inflationary environments. This is because its royalties bear no offsetting component of increased industry-wide operating or capital cost burdens, which ultimately lead to higher product prices and gross revenues.

We continue to favor an approach of realizing upon organic growth from our highly expandable portfolio of long-life royalty holdings (near term catalysts described further below) over M&A based growth; however the Corporation maintains preparedness and liquidity to act upon attractive external opportunities that may present themselves – particularly during pronounced periods of weak sentiment and hesitancy amongst competing capital sources.

Portfolio Organic Growth Highlights

Potash Market constrained by eastern European supply challenges – growth signaled for Altius royalty portfolio mines

Potash prices spiked during the first half of 2022 following the start of the Ukraine war but have since retreated to pre-existing levels. Many growers made decisions last year to reduce fertilizer application rates in response to the constrained supplies and high prices. This is estimated to have resulted in a reduction of potassium nutrient replenishment in global soils by more than 10% as compared to the prior year. These deferrals will naturally come at the cost of smaller harvests and weaker crops unless the resulting soil nutrient shortfalls are compensated for in subsequent periods. Meanwhile, global grain and other key food stocks sit at historic lows in terms of days of consumption.

Our Canadian based mine operators continue to make capital investments to increase production capacity to address the current, and likely future, global supply deficits that largely relate to sanctions and logistical constraints in Belarus and Russia. Russia and Belarus have traditionally been the number 2 and 3 potash producing countries in the world after Canada.

Saúva discovery adds life extension and/or production rate increase potential to Chapada stream

Lundin Mining Corp ("Lundin") continues to expand its new Saúva copper-gold deposit discovery, located 15 kilometers north of the Chapada Mine, and on lands encompassed by our copper stream interest. As reported by Lundin on February 8, 2023 "Saúva's indicated mineral resource is estimated to be 179.0 Mt at 0.32% copper and 0.20 g/t gold, containing 578 kt (1.3 Blb) of copper and 1.1 Moz of gold". Lundin also noted that the deposit remains open in all directions and an ongoing 2023 exploration program is expected to include 55,000 m of drilling.

Lundin has also reported that the Saúva resources, which are of notably higher grade than those being mined at Chapada presently, are being evaluated within the context of its ongoing broader Chapada expansion studies.

Lithium Royalty Corporation IPO based potential value "daylighting" – plus first ever direct lithium royalty revenue expected in 2023

Lithium Royalty Corporation ("LRC"), of which Altius is a co-founding 11.4% shareholder, continued to build out its royalty portfolio with the total number of project royalties acquired since inception in 2018 now amounting to 29 royalties on 27 properties, with two currently producing and four in construction. Producing assets include a tonnage-based royalty on Allkem's Mt. Cattlin Mine in Australia and a gross royalty on Core Lithium's Finniss project in Australia. Construction stage royalty assets include Sigma Lithium's Groto do Cirilo project in Brazil (expected to start production Q2 2023), and each of Zijin Mining's Tres Quebradas project and Gangfeng Lithium's Mariana projects in Argentina, which are both anticipated to begin production later this year or early next year. LRC filed a preliminary base PREP prospectus on February 21, 2023 describing a proposed initial public offering of common shares as it continues to advance several new royalty investment opportunities.

In addition, Altius holds minority partnership-based interests in each of LRC's Tres Quebradas, Groto do Cirilo and Mariana royalties and therefore expects to begin to add direct royalty revenues relating to lithium production to its portfolio during the current year.

Curipamba Project continues to achieve critical milestones – potential construction decision in H2, 2023

Adventus Mining Corporation ("Adventus") continues to progress the Curipamba-El Domo copper-gold project in Ecuador with its recent announcement of an investment protection agreement with the Government of Ecuador. This follows its entering into a comprehensive project finance package for the project earlier in 2022. It is currently completing a social consultation process with regional stakeholders and completing other studies in expectation of making a construction decision in the second half of the year. Altius retains a 2% NSR royalty on the Curipamba project.

Coal royalties winding down as ARR portfolio growth continues through acquisitions and developer investments

The expected conversion from coal to natural gas at the approximately 1,200 MW Genesee power plant remains on track based on operator statements, with 2023 being the last year of expected thermal coal-based power generation. The decline and ultimate elimination of coal royalty revenue from Altius's portfolio is coinciding with the ramp up of royalty revenues from a growing list of renewable energy projects to which the Corporation has exposure through its majority shareholding in ARR.

ARR, though its joint venture, continues to grow its exposure to operating and development stage renewable energy royalty projects that now represent total potential generating capacity in excess of 8,000MW. Several new royalties were added to its portfolio through a combination of developer-based financing agreements and direct royalty investment in advanced-stage and operating projects during the year and an additional 300MW capacity project royalty , flowing from its developer investments, is expected to begin contributing revenue in early 2023. Furthermore, ARR continues to evaluate new royalty investment opportunities spanning the full spectrum of development to production stage assets which could potentially further augment its growth profile. Additional information on ARR's activities can be obtained through its quarterly and year end reporting materials, which were released on March 1, 2023.

Kami Project Updated Feasibility Study – rare potential to produce high-premium (DRI grade) iron ore and support non-coal based steelmaking

Champion Iron Ore Limited ("Champion") is completing studies concerning the potential development of the Kami Iron Ore project in the Labrador Trough as it considers next growth opportunities following completion of its expansion of the neighbouring Bloom Lake mine, which achieved commercial production in December 2022. Kami contains significant resources of iron ore that are believed to be amenable to producing ultra-pure concentrate products, including those that could potentially serve the rapidly accelerating transition towards electric arc furnace (no coal input) based steelmaking at the expense of traditional blast furnace steelmaking. Results of these studies are expected to be reported by Champion in the second half of 2023. Altius retains a 3% gross sales royalty on the Kami project.

Continuing with iron ore, the Rio Tinto controlled Iron Ore Company of Canada ("IOC") mining complex in Labrador is operating within recent production ranges while continuing to benefit from structural premium pricing levels for its relatively high-purity iron ore products that include blast furnace and direct reduction pellets. IOC has recently permitted new mining areas that are expected to expand the life of its operations while also making significant capital investments that are intended to increase incremental production levels and improve pellet plant performance. Altius holds an indirect royalty interest in the IOC mining complex through its holding in Labrador Iron Ore Royalty Corporation.

Silicon area continues to rapidly emerge as a new world-class Nevada gold district discovery – Altius royalty of increasing potential significance

AngloGold Ashanti Limited ("AGA") continues to advance the discovery of a potential major new gold district, centered around its Silicon Project, which is located near Beatty, Nevada. On February 22, 2023 AGA reported an increased and higher-confidence mineral resource estimate for the Silicon deposit of 4.22 million ounces ("Moz") of gold (3.4 million ounces as Indicated and 0.8 million ounces as Inferred) and further mineral resource estimates totaling 4.18 Moz from 3 smaller nearby deposits (North Bullfrog – 1.19 Moz measured and indicated and 0.36 Moz inferred; Motherlode – 1.55 Moz indicated and 0.17 Moz inferred; and Sterling - 0.91 Moz inferred). It also reported that it has now elected to evaluate the Merlin deposit discovery on an integrated basis with Silicon, as part of a combined pre-feasibility study, with results expected in 2023. This reporting will presumably include or follow a maiden resource estimate for Merlin, which was recently publicly described by AGA's CEO on their Q4 2022 financial results conference call as the "real gem" in its Nevada portfolio.

The Corporation has delivered requests to AGA under the terms of its royalty agreement for the registration of our royalty interest in relation to certain mineral lands that have been acquired by AGA that surround the central lands that host the Silicon and Merlin discovery areas. These include additional contiguous or adjacent lands staked directly by AGA and those acquired by it through third party acquisitions (e.g. Corvus Gold and Coeur Mining lands). AGA has responded that it does not agree that these additional surrounding lands are subject to the royalty. While discussions to find an amicable resolution are ongoing, the royalty agreement does allow for dispute resolution through arbitration in British Columbia should an agreement on our royalty entitlements prove unattainable.

The Corporation also continues to consider value creation alternatives for its 1.5% NSR royalty with these including potential combinations of a full or partial sale or a swap type transaction for non-precious metal royalty assets as the potential of the district and the value of the royalty becomes more fully apparent and as resolution regarding the full potential extent of the royalty is achieved.

Within the Project Generation business, demand for new projects from third parties continues to be relatively strong although the recent decline in junior equities markets has weakened access to exploration capital in addition to reducing the value and liquidity of our retained equities portfolio. As a result of the general decline in junior equity markets the Corporation has been availing of select investment opportunities that have emerged. We also continue to directly invest in project generation activities with a goal of adding new early-stage mineral prospects for sale, while also actively managing our portfolio of related equity interests.

Non-GAAP Financial Measures

Management uses the following non-GAAP financial measures in this MD&A and other documents: attributable revenue, attributable royalty revenue, adjusted earnings before interest, taxes, depreciation and amortization (adjusted EBITDA), adjusted operating cash flow and adjusted net earnings (loss).

Management uses these measures to monitor the financial performance of the Corporation and its operating segments and believes these measures enable investors and analysts to compare the Corporation's financial performance with its competitors and/or evaluate the results of its underlying business. These measures are intended to provide additional information, not to replace International Financial Reporting Standards (IFRS) measures, and do not have a standard definition under IFRS and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. As these measures do not have a standardized meaning, they may not be comparable to similar measures provided by other companies. Further information on the composition and usefulness of each non-GAAP financial measure, including reconciliation to their most directly comparable IFRS measures, is included in the non-GAAP financial measures section starting on page 26.

Annual Highlights

Selected Annual Information

In Thousands of Canadian Dollars, except per share amounts	Year ended December 31, 2022	December 31, 2021	December 31, 2020
Revenue per the consolidated financial statements	$ 102,047	$ 81,682	$ 60,057
Attributable revenue			
Attributable royalty (1)	$ 103,471	$ 83,930	$ 67,502
Project generation	5,248	504	-
Attributable revenue (1)	108,719	84,434	67,502
Total assets	$ 780,584	$ 721,401	$ 589,610
Total liabilities	171,775	192,422	205,785
Dividends declared & paid to common shareholders	13,854	9,947	8,318
Adjusted EBITDA (1)	89,654	66,950	52,820
Adjusted operating cash flow (1)	75,916	49,415	47,456
Net earnings (loss)	39,482	38,280	(26,213)
Attributable royalty revenue per share (1)	$ 2.27	$ 2.03	$ 1.62
Adjusted EBITDA per share (1)	1.97	1.62	1.27
Adjusted operating cash flow per share (1)	1.65	1.19	1.14
Net earnings (loss) per share, basic	0.82	0.97	(0.65)
Net earnings (loss) per share, diluted	0.80	0.94	(0.65)

(1) *See non-GAAP financial measures section for definition and reconciliation*

Revenue and attributable royalty revenue as well as adjusted EBITDA increased from 2020 and 2021 based on strong commodity prices and volumes. Adjusted operating cash flow reflected growth and was impacted by timing of income taxes paid, including the postponement of corporate income taxes in 2020 as a result of COVID19 measures. Asset growth over the same period reflects the growth of the Corporation's renewable royalty segment as well as market revaluations on investments. See additional discussion in Financial Performance and Results of Operations.

Altius Renewable Royalties Corp.

In December 2022 the Corporation purchased 2,298,700 additional common shares in Altius Renewable Royalties Corp. for $20,688,000 as part of a financing completed by ARR. Total proceeds raised by ARR were $38,419,000 for issuance of 4,268,800 shares which included a partial exercise of an overallotment by the underwriters. The Corporation beneficially owns 17,937,339 common shares and 3,093,835 share purchase warrants, representing approximately 58% of the issued and outstanding ARR shares on a non-diluted basis.

During the year ended December 31, 2022 US$43,850,000 (CAD$58,583,000) was funded into the GBR joint venture by ARR. These amounts were used to fund ARR's 50% of renewable royalty investments into Titan Solar ("Titan"), Hodson Energy, LLC ("Hodson"), Bluestar Energy Capital LLC ("Bluestar") and Nova Clean Energy LLC ("Nova"), a wind project in Hansford County, Texas, a Tri Global Energy LLC ("TGE") investment tranche as well as working capital for GBR.

Acquisition of Investments

During the year ended December 31, 2022 the Corporation acquired investments of $47,814,000 primarily reflecting the acquisition of 866,000 additional shares in Labrador Iron Ore Royalty Corporation for $25,947,000, bringing the total share ownership to 3,739,800 shares or 5.8% of total shares outstanding. The Corporation also invested an additional $2,584,000 into LRC and $1,299,000 through its co-participation rights in project level royalty acquisitions completed by LRC. In addition, acquisitions totaling $5,411,000 during the year added to the junior equities portfolio.

On June 7, 2022 the Corporation funded a US$10,000,000 (CAD$12,573,000) investment in the form of common shares in Invert Inc. ("Invert"), a carbon streaming and investment company making investments in carbon credit projects and building a platform to place the credits with corporate and individual participants to reach their decarbonization objectives. On March 9, 2022 the Corporation invested in a secured convertible note of US$5,000,000 in Invert which followed the original equity investment of US$500,000 funded in 2021. The note bears interest at a 7% annual rate, has a term of one year and is convertible to equity at an agreed discount upon a go-public event. Subsequent to December 31, 2022 the Corporation agreed to extend the term of the note for one year, with minor improvements to the conversion feature.

Preferred Securities

On April 14, 2022 Fairfax Financial Holdings Limited, through certain of its affiliates (collectively, "Fairfax"), exercised 6,670,000 common share purchase warrants (the "Warrants") at an exercise price of $15.00 per common share in the capital of Altius for gross proceeds of $100,000,000. In accordance with the terms of the Warrants and the preferred security indenture dated April 26, 2017 between the Corporation and TSX Trust Company governing the Corporation's 5% subordinate preferred securities (the "Preferred Securities"), Fairfax elected to pay the exercise price of the Warrants by surrendering its $100,000,000 Preferred Securities to Altius for cancellation, in full satisfaction of the exercise price payable in respect of the Warrants.

As part of the redemption of the Preferred Securities, the Corporation made cash payments of $2,086,000, which amount fully satisfied Altius' interest and other obligations under the Indenture.

Cash Flow from Project Generation Equity Portfolio

During the three months ended December 31, 2022 sales exceeded new investments for net proceeds of $1,995,000. During the year ended December 31, 2022 new investments amounted to $5,411,000 and sales of public equities from the portfolio totaled $3,416,000. In addition, the Corporation recorded income of $4,948,000 related to its investment in Chile during the year ended December 31, 2022. During the year the Corporation's Project Generation investments declined in value in line with the broader junior equity and commodity markets. However, most of the companies held within the Corporation's Project Generation investment holdings continued to maintain adequate cash balances to conduct their currently planned exploration programs. Altius estimates that approximately 270 kms of drilling will be completed across its portfolio of exploration and development focused equities and royalty holdings during 2023.

Capital Allocation

In addition to the acquisition of investments noted above, during the quarter ended December 31, 2022 the Corporation made $2,000,000 in scheduled payments on its credit facilities and paid dividends of $3,809,000 ($0.08 per common share). During the year ended December 31, 2022 the Corporation made $8,000,000 in scheduled payments on its credit facilities, completed a drawdown on its revolving facility of $10,000,000 to acquire investments and paid dividends of $13,854,000 ($0.30 per common share). There were no shares repurchased under its normal course issuer bid during the fourth quarter of 2022 but 268,000 were repurchased and cancelled during the year ended December 31, 2022 at a cost of $4,835,000 or $18.04 per share.

The Corporation renewed its Normal Course Issuer Bid ("NCIB") by which it may purchase at market price up to 1,698,481 common shares being approximately 3.56% of the 47,680,588 common shares issued and outstanding as of August 10, 2022, through the facilities of the Toronto Stock Exchange ("TSX") or a Canadian alternative trading system. The NCIB commenced on August 22, 2022 and will end no later than August 21, 2023. Any shares purchased during the NCIB will be cancelled and returned to treasury.

Financial Performance and Results of Operations

In Thousands of Canadian Dollars, except per share amounts	Three months ended			Year ended		
	December 31, 2022	December 31, 2021	Variance	December 31, 2022	December 31, 2021	Variance
Revenue per consolidated financial statements	$ 21,654	$ 22,625	$ (971)	$ 102,047	$ 81,682	$ 20,365
Attributable revenue						
Attributable royalty	$ 23,122	$ 23,456	$ (334)	$ 103,471	$ 83,930	$ 19,541
Project generation	134	96	38	5,248	504	4,744
Attributable revenue (1)	23,256	23,552	(296)	108,719	84,434	24,285
Total assets	$ 780,584	$ 721,401	$ 59,183	$ 780,584	$ 721,401	$ 59,183
Total liabilities	171,775	192,422	(20,647)	171,775	192,422	(20,647)
Dividends declared & paid to common shareholders	3,617	2,713	904	13,854	9,947	3,907
Adjusted EBITDA (1)	18,000	17,748	252	89,654	66,950	22,704
Adjusted operating cash flow (1)	19,224	15,873	3,351	75,916	49,415	26,501
Net earnings (loss)	6,825	2,163	4,662	39,482	38,280	1,202
Attributable royalty revenue per share (1)	$ 0.49	$ 0.57	$ (0.08)	$ 2.27	$ 2.03	$ 0.24
Adjusted EBITDA per share (1)	0.38	0.43	(0.05)	1.97	1.62	0.35
Adjusted operating cash flow per share (1)	0.40	0.38	0.02	1.65	1.19	0.46
Net earnings (loss) per share, basic	0.14	0.07	0.07	0.82	0.97	(0.15)
Net earnings (loss) per share, diluted	0.13	0.07	0.06	0.80	0.94	(0.14)

(1) *See non-GAAP financial measures section for definition and reconciliation*

Total revenue in the consolidated statements of earnings for the quarter and year ended December 31, 2022 was $21,654,000 and $102,047,000 respectively, which increased compared to the comparable periods in 2021 due to higher commodity prices as well as higher investment income relating to the Corporation's investment in Chile.

Attributable royalty revenue (see non-GAAP financial measures), adjusted for joint venture revenues, was $23,122,000 ($0.49 per share) for the quarter ended December 31, 2022 which was comparable to $23,456,000 ($0.57 per share) recorded in the three months ended

December 31, 2021. Annual attributable royalty revenue of $103,471,000 ($2.27 per share) is 23% higher than the prior year amount of $83,930,000 ($2.03 per share). While the fourth quarter revenue is comparable year over year, the annual increase in revenue is mainly a result of higher realized commodity prices and the commencement of renewable royalty revenue from recently acquired projects.

Adjusted EBITDA for the three months and year ended December 31, 2022 was $18,000,000 ($0.38 per share) and $89,654,000 ($1.97 per share), respectively, which compares to $17,748,000 ($0.43 per share) and $66,950,000 ($1.62 per share) for the prior year periods. The increases in adjusted EBITDA follow the trend of increased revenue but are partially offset by higher professional development fees as well as higher public company related costs within the Renewable Royalties segment, with ARR becoming a public company during the first quarter of 2021.

The respective adjusted EBITDA margins of 77% and 82% in the quarter and year ended December 31, 2022 were higher than the 75% and 80% recorded for the comparable periods in 2021, driven primarily by strong contributions from the Mineral Royalties segment. As discussed above, increases in revenue are partially offset by higher expenses within the Renewable Royalties segment, for which revenues are expected to continue to grow in future periods as more renewable projects reach commercial operations. For both years ended December 31, 2022 and 2021 the Mineral Royalties segment had an adjusted EBITDA margin of 87%.

Joint venture distributions, which are included in the investing section of the cash flow statement, are added to cash from operations resulting in adjusted operating cash flow for purposes of this discussion. Adjusted operating cash flow for the fourth quarter of 2022 of $19,224,000 ($0.40 per share) is higher than the $15,873,000 ($0.38 per share) generated in the comparable period in 2021. Annual adjusted operating cash flow of $75,916,000 ($1.65 per share) compares to $49,415,000 ($1.19 per share) in 2021. The increase compared to prior year is largely reflective of higher Mineral Royalty revenues.

Net earnings in the three months ended December 31, 2022 were $6,825,000 ($0.14 per share) compared to $2,163,000 ($0.07 per share) recorded in the comparable period of 2021. Net earnings for the year ended December 31, 2022 were $39,482,000 ($0.82 per share) compared to $38,280,000 ($0.94 per share). Net earnings for the quarter and year ended December 31, 2022 were positively impacted by strong royalty revenue and were partially offset by negative fair value adjustments on derivatives and foreign exchange.

Total assets net of total liabilities increased by approximately $79,830,000 from December 31, 2022 as a result of revaluation gains on investments and additions to the Corporation's renewable energy investments held by ARR as well as the reversal of certain deferred tax liabilities which are described in further detail below.

Costs and Expenses

In Thousands of Canadian Dollars	Three months ended			Year ended		
Costs and Expenses	December 31, 2022	December 31, 2021	Variance	December 31, 2022	December 31, 2021	Variance
General and administrative	$ 2,978	$ 3,046	$ (68)	$ 10,511	$ 9,051	$ 1,460
Cost of sales - copper stream	1,204	2,100	(896)	5,646	5,701	(55)
Share-based compensation	886	698	188	3,408	3,018	390
Generative exploration	98	20	78	201	55	146
Exploration and evaluation assets abandoned or impaired	55	-	55	84	2,889	(2,805)
Mineral rights and leases	-	-	-	227	274	(47)
Amortization and depletion	5,916	6,295	(379)	24,292	22,913	1,379
	$ 11,137	$ 12,159	$ (1,022)	$ 44,369	$ 43,901	$ 468

General and administrative expenses for the three months ended December 31, 2022 were comparable to the prior year period. For the year ended December 31, 2022 general and administrative expenses were higher than the prior year driven by an increase in overall professional fees as well as public company fees related to the operations of ARR, which are consolidated in the results of the Corporation. Relaxation of COVID-19 restrictions also resulted in increased travel and corporate development related expenses in the current year periods relative to comparable prior year periods.

In future periods it is expected that the ARR related costs will be offset by asset growth and higher revenues as renewable energy royalty investments are completed and more projects subject to royalty reach operational status. During the quarter and year ended December 31, 2022, ARR incurred salary and office costs of approximately $492,000 and $1,886,000 respectively as compared to $757,000 and $1,762,000 in the comparable prior year periods. ARR's year over year costs are comparable however costs in the fourth quarter of 2022 included lower professional fees reflecting differences in timing of various initiatives and transactions undertaken.

Another component of general and administrative expenses of the Corporation relates to the administration and staffing of its Project Generation segment. During the three months and year ended December 31, 2022 this amounted to $626,000 and $2,405,000 respectively as compared to $697,000 and $2,306,000 incurred in the 2021 comparable periods. In 2022, revenues from the Project Generation segment include $4,948,000 related to the Corporation's investment in Chile. This business creates long-term royalty opportunities and receives equity positions in public companies in exchange for mineral projects and cash investments. It is important to note that equity sales related to the Project Generation segment are not included as a revenue contribution but are instead recorded in the statement of comprehensive earnings, resulting in positive cash flow from equity sales but no corresponding increase in revenue. Net equity sales for the quarter ended December 31, 2022 generated cash of $626,000 while net investments year to date exceeded equity sales for a net cost of $1,995,000 compared to the cash generation of $3,335,000 and $16,084,000 respectively in the prior year periods.

Cost of sales for the Chapada copper stream for the three months ended December 31, 2022 are lower than the same prior year period and are in line year over year as these are proportional to copper stream revenue. Under the streaming agreement the Corporation purchases copper at 30% of the spot copper price.

Amortization and depletion are lower for the fourth quarter in 2022 in comparison to the prior year period as the 777 royalty was fully amortized in the second quarter of this year. Amortization and depletion are higher on an annual basis reflective of higher production volumes for certain assets.

During the quarter and year ended December 31, 2022 the Corporation recorded an impairment of $55,000 and $84,000 respectively versus $nil and $2,889,000 in the prior year periods. The impairment recorded in the prior year related to the Corporation's exploration and evaluation Lynx diamond project in Manitoba.

Other factors which contributed to the change in the Corporation's earnings are:

In Thousands of Canadian Dollars	Three months ended December 31, 2022	December 31, 2021	Variance	Year ended December 31, 2022	December 31, 2021	Variance
Earnings (loss) from joint ventures	$ (785)	$ 132	$ (917)	$ 1,835	$ (380)	$ 2,215
Realized (loss) gain on disposal of derivatives	(657)	1,675	(2,332)	(716)	6,121	(6,837)
Gain on disposal of mineral property	1,170	495	675	2,166	4,704	(2,538)
Interest on long-term debt	(2,216)	(1,510)	(706)	(7,019)	(6,824)	(195)
Foreign exchange (loss) gain	1,029	145	884	(1,699)	530	(2,229)
Impairment of goodwill	-	(6,031)	6,031	-	(6,031)	6,031
Dilution gain on issuance of shares by a joint venture	-	1	(1)	-	580	(580)
Unrealized gain (loss) on fair value adjustment of derivatives	1,008	(1,141)	2,149	(382)	(165)	(217)
Gain on reclassification of an associate	-	-	-	-	7,595	(7,595)
Share of earnings (loss) and impairment reversal in associates	(7)	2	(9)	(7)	1,263	(1,270)
Income tax (expense) recovery	(3,234)	(2,071)	(1,163)	(12,374)	(6,894)	(5,480)

- The Corporation recognized a loss in joint ventures of $785,000 in the current three months ended December 31, 2022 as opposed to a gain of $132,000 in the comparable period primarily due to increased renewable royalty expenses within the GBR joint venture in the fourth quarter. Overall earnings in joint ventures for the year ended December 31, 2022 was higher than the loss in joint venture recorded in the prior year primarily due to increased renewable royalty revenue generated within the GBR joint venture. In addition, the Corporation's ownership in the GBR joint venture was diluted from 89% to 50% during the year ended December 31, 2021 resulting in a higher proportion of losses being recorded by the Corporation in the prior year.
- During the quarter and year ended December 31, 2022 the Corporation recorded a realized loss on disposal of derivatives of $657,000 and $716,000 related to the expiry of share purchase warrants and recorded gains of $1,675,000 and $6,121,000 in the comparable periods in 2021 on the sale and exercise of share purchase warrants. The Corporation recognized an unrealized gain on the fair value adjustment of derivatives of $1,008,000 and a loss of $382,000 during the three months and year ended December 31, 2022 respectively compared to an unrealized loss of $1,141,000 and $165,000 in the comparable periods in 2021. These fair value adjustments generally follow the trend of junior equity market values.
- A gain on disposition of mineral properties of $1,170,000 and $2,166,000 was recorded during the three months and year ended December 31, 2022 related to the receipt of common shares resulting from agreements for the Corporation's Golden Rose, Hermitage, Aramo, Taylor Brook and White Bay South mineral properties. The Corporation recorded gains in the prior year comparable periods of $495,000 and $4,704,000 respectively. The prior period gains primarily related to the Corporation's Adeline Copper, Golden Baie and Golden Rose properties. Additional information on the mineral properties and the respective sale agreements can be found in Note 4 to the consolidated financial statements.
- Recent interest rate increases resulted in overall higher interest expense for the quarter and year ended December 31, 2022 compared to the same prior year periods. Rate increases were offset by more favorable pricing on the Corporation's credit facility as a result of amendments to the Corporation's credit facilities in 2021.

- Foreign exchange gains and losses recorded in the quarter and year ended December 31, 2022 were driven by fluctuating exchange rates in the current year in comparison to the prior year comparable periods resulting from the weakening Canadian dollar.

- During the prior year the Corporation determined it no longer had significant influence over financial and operating policy decisions of Adventus and reclassified the investment in Adventus to mining investments, resulting in a gain on reclassification of an associate of $7,595,000. The Corporation recorded its share of loss in associate of $364,000 during the year ended December 31, 2021 related to Adventus. In addition, during the first quarter of 2021, the Corporation reversed an impairment charge from 2020 on a portion of the loan receivable from Alderon Iron Ore Corp of $1,625,000 which offset the Corporation's share of loss in associates during 2021. The share of loss in associate of $7,000 in the current year is related to the Corporation's investment in Adia Resources Inc.

- During the three months and year ended December 31, 2021 the Corporation recorded dilution gains of $1,000 and $580,000 respectively in relation to additional investments made by Apollo Funds in the GBR joint venture. No dilution gains were recorded in the current year.

- Tax expense is higher for the quarter and year ended December 31, 2022, reflecting higher taxable earnings.

Segment Performance

The Corporation manages its business under three operating segments as described under Description of Business above, being Mineral Royalties, Project Generation and Renewable Royalties.

A summary of the Corporation's attributable royalty revenue and key highlights are as follows:

In Thousands of Canadian Dollars Summary of attributable royalty revenue	Three months ended December 31, 2022	December 31, 2021	Variance	Year ended December 31, 2022	December 31, 2021	Variance
Revenue						
Base and battery metals						
777 Mine	$ 129	$ 3,641	$ (3,512)	$ 7,507	$ 15,020	$ (7,513)
Chapada	4,142	7,048	(2,906)	19,116	19,182	(66)
Voisey's Bay	431	628	(197)	1,877	2,341	(464)
Gunnison	-	12	(12)	12	23	(11)
Potash						
Cory	1,193	955	238	4,300	2,047	2,253
Rocanville	5,348	3,534	1,814	21,941	10,644	11,297
Allan	301	547	(246)	1,769	1,382	387
Patience Lake	415	346	69	1,341	709	632
Esterhazy	2,510	1,408	1,102	11,585	4,239	7,346
Vanscoy	43	105	(62)	458	230	228
Lanigan	7	12	(5)	51	33	18
Iron ore [(1)]	2,618	3,305	(687)	10,666	17,243	(6,577)
Thermal (Electrical) Coal						
Genesee	3,767	1,368	2,399	15,037	8,551	6,486
Sheerness	6	53	(47)	138	555	(417)
Other						
Renewables	1,171	299	872	4,795	411	4,384
Natural gas	224	181	43	857	572	285
Interest and investment (2)	817	14	803	2,021	748	1,273
Attributable royalty revenue	$ 23,122	$ 23,456	$ (334)	$ 103,471	$ 83,930	$ 19,541

See non-GAAP financial measures section of this MD&A for definition and reconciliation of attributable revenue

(1) LIORC dividends received

(2) Includes ARR interest and investment income of $1,034 for year ended December 31, 2022

Summary of attributable royalty volumes and average prices	Three months ended December 31, 2022 Tonnes	Average price [(1)]	December 31, 2021 Tonnes	Average price [(1)]	Year ended December 31, 2022 Tonnes	Average price [(1)]	December 31, 2021 Tonnes	Average price [(1)]
Chapada copper [(3)]	392	$3.51 US / lb	608	$4.19 US / lb	1,647	$4.07 US / lb	1,662	$4.18 US / lb
777 copper [(4)]	-	$3.64 US / lb	2,432	$4.40 US / lb	4,536	$4.15 US / lb	11,147	$4.21 US / lb
777 zinc [(4)]	-	$1.37 US / lb	8,706	$1.52 US / lb	14,946	$1.52 US / lb	32,540	$1.36 US / lb
Potash [(5)]	366,994	$1,119 / tonne	392,397	$723 / tonne	1,614,023	$1,054 / tonne	1,676,117	$486 / tonne
Thermal (electrical) coal [(2,5)]	568,676	N/A	246,289	N/A	2,073,021	N/A	1,613,403	N/A

(1) Average prices are in CAD unless noted
(2) Inflationary indexed rates
(3) Copper stream; quantity represents actual physical copper received
(4) 4% NSR; production figures shown represent 100% of production subject to the royalty
(5) Various production royalties; quantities represent tonnes subject to the royalties at each respective mine (royalty tonnes only)

Mineral Royalties

Base and Battery Metal Royalties

Base and battery metal (primarily copper) revenue of $4,702,000 and $28,512,000 for the quarter and year ended December 31, 2022 is lower than the $11,317,000 and $36,566,000 in comparable periods in 2021. This primarily reflects the closure of the 777 mine during the second quarter in 2022 with royalties from other operations performing largely as expected. Average realized copper prices during both years were very similar.

Early in 2022, Lundin Mining announced the discovery of the Saúva deposit at Chapada, which has initially indicated copper grades that are significantly higher than currently mined head grades. An aggressive delineation drilling program continued throughout the year and Lundin has indicated that the deposit is being considered as part of its ongoing production expansion studies at the operation and in February of 2023 Lundin announced its maiden Mineral Resource Estimate (see Outlook for additional information). The Corporation's stream agreements include the Saúva discovery area.

At Voisey's Bay, underground mining has begun with initial production from the Reid Brook mine, while development of the Eastern Deeps mine continues. Exploration efforts also continued to indicate the potential for mine life extensions, particularly beneath the currently defined resource areas at Reid Brook where long core length and high-grade nickel and copper drilling intercepts are being encountered and highlight the potential for future resource and mine life growth.

Additional information concerning ongoing initiatives at various of the Corporation's operating and development stage base and battery metal holdings can be found in the Outlook section of this report.

Saskatchewan Potash Royalties

Potash revenue of $9,816,000 for the quarter and $41,445,000 for the year ended December 31, 2022 increased by 42% and 115% respectively over the comparable periods in 2021, mainly due to higher realized pricing in the first half of the year as the market reacted to supply concerns relating to the Russia-Ukrainian war. Tonnes of potash production attributable to royalties were similar to prior year levels.

The K3 production unit at Mosaic's Esterhazy mine was fully commissioned during the year with production from this unit now replacing production from the K1 and K2 production units.

Both Mosaic and Nutrien announced the start of capital investment programs during the year that are designed to complete the ramp-up of production capacity at most of our royalty mines. These investments have been initiated in response to both current and projected long-term global supply constraints that have emerged and medium to long-term trend-line based demand growth expectations.

Additional information concerning ongoing developments and initiatives at various of the Corporation's potash royalty holdings can be found in the Outlook section of this report.

Iron Ore

Iron ore revenue in the form of dividends from Labrador Iron Ore Royalty Corp. ("LIORC"), which serves as a pass-through vehicle for royalty income and equity dividends related to the operations of Iron Ore Company of Canada ("IOC"), was $2,618,000 and $10,666,000 for the quarter and year ended December 31, 2022 respectively, compared to revenue of $3,305,000 and $17,243,000 for the comparable periods in 2021. The decrease was primarily the result of lower realized product prices and lower equity dividends from IOC - as a greater percentage of IOC's free cash flow was directed towards growth and sustaining capital investments in the current year. During the year the Corporation increased its shareholding in LIORC by 866,000 shares to 3,739,800 shares or 5.8% of the total shares outstanding, at a total cost of $25,947,000.

IOC's iron ore product mix includes an approximately 65% iron content concentrate and both blast furnace and DR pellets. Average market based P65% concentrate prices during the year were US$142 in 2022 vs US$195 in 2021. Average realized pellet prices at IOC were US$190/t in 2022 vs US$214/t in 2021 reflecting continued relative strength for highest purity products as the iron ore and steel making industries continue to evolve towards less polluting forms of manufacturing.

Champion Iron is expected to announce the results of an updated feasibility study for the Kami project later in 2023, which is located nearby to the IOC operations as well as to Champion Iron's Bloom Lake mine. The study is targeting production of DR grade pellet feed. Altius originated the Kami project within its Project Generation business and retains a 3% gross sales royalty interest.

Additional information concerning ongoing developments and initiatives at various of the Corporation's iron ore royalty holdings can be found in the Outlook section of this report.

Genesee Electrical Coal Royalties

Total thermal (electrical) coal revenue of $3,774,000 and $15,175,000 during the quarter and year ended December 31, 2022 was higher than the $1,421,000 and $9,049,000 recorded in the comparable periods in 2021. The increase reflected higher inflation adjusted royalty rates, higher plant utilization rates and coal consumption at the Genesee power plant, which was negatively impacted by unplanned maintenance shutdowns in the prior year. The operator of the Genesee power plant continues with natural gas-based conversion investments that are expected to commission over the next year and bring an end to coal usage by the end of 2023.

In January 2021, the Corporation was advised that the Alberta Court of Queen's Bench dismissed our appeal of the earlier decision of a Master of the Court to grant summary dismissal of our claim against the Governments of Alberta and Canada for the constructive taking of our Genesee coal royalty interest. The Corporation disagreed with the Court decision and lodged an appeal of the decision, which was then stayed pending a decision of the Supreme Court of Canada in a case involving similar issues.

The Supreme Court of Canada rendered its decision in Annapolis Group v Halifax Regional Municipality on 21 October 2022, where the Court clarified that the legal test for a constructive taking or de facto expropriation does not require that the government acquire an interest in the property at issue, and that it is sufficient if a beneficial interest in the form of an "advantage" flows to the state.

It is our position that the Alberta and Canadian governments phased out coal-fired emissions to obtain publicly stated advantages relating to avoided health care and climate change linked costs. Altius has continued its appeal of the dismissal on the basis that the Supreme Court has now clarified the test used to determine whether a constructive taking has occurred. This appeal is expected to be heard by the Court of Appeal of Alberta in the fall of this year.

Renewable Royalties

Altius Renewable Royalties

ARR continued to ramp up royalty revenue from its US-based renewable energy project investments. As a result of its controlling shareholding, the Corporation reports ARR financial results on a consolidated basis. Attributable revenue of $1,171,000 and $4,795,000 for the quarter and year ended December 31, 2022 was higher than the $299,000 and $411,000 in the comparable periods during 2021. At the underlying GBR JV, revenue of US$7,300,000 was recorded, exceeding GBR's guidance of US$6,500,000 to US$7,000,000 and compares to recently released guidance of US$11,500,000 to US$13,500,000 for 2023. Several new royalties were added to its portfolio through a combination of developer-based financing agreements and direct royalty investment in advanced-stage and operating projects during the year. In December 2022 the Corporation invested $20,688,000 through participation in an equity financing completed by ARR to support it in completing acquisitions of two additional production stage royalties. Further details regarding ARR and its activities can be found on ARR's website or by accessing its public filings on SEDAR. See Outlook section for additional discussion relating to ARR.

Refer to Appendix 3 – Summary of ARR's Operational, Construction and Development Renewable Energy Royalties for a detailed listing of royalties.

Project Generation

Pre-Production Royalties & Junior Equities Portfolio Highlights

The Corporation's junior equities portfolio had a market value of $50,300,000 at December 31, 2022 (December 31, 2021 - $55,500,000). During the three months ended December 31, 2022 net proceeds from equity sales of $626,000 were recorded. For the year ended December 31, 2022 the Corporation's new investments exceeded equity sales for a net cost of $1,995,000. The Corporation recognized total gains on disposition of Project Generation investments of $876,000 and $1,105,000 for the quarter and year ended December 31, 2022 (December 31, 2021 - $1,163,000 and $10,416,000) in the consolidated statement of comprehensive earnings.

Project Generation revenues of $134,000 and $5,248,000 include $nil and $4,948,000 respectively related to the wind up of the Corporation's investment in Mining Equity, a private entity it previously co-founded in 2012 to perform regional early-stage exploration and prospect generation in Chile.

The technical information contained in this MD&A has been reviewed and approved by Lawrence Winter, Ph.D., P.Geo., Vice-President of Exploration, a Qualified Person as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

Additional information concerning ongoing developments and initiatives within Altius's Project Generation business can be found in the Quarterly Highlights and Outlook sections of this report. Readers are also encouraged to visit the corporate website at www.altiusminerals.com to gain added insight into the exploration activities and projects of the Corporation, including the Corporation's Project Generation investments.

Cash Flows, Liquidity and Capital Resources

In Thousands of Canadian Dollars	Year ended	
Summary of Cash Flows	**December 31, 2022**	**December 31, 2021**
Operating activities	$ 74,260	$ 47,299
Financing activities	(10,751)	56,990
Investing activities	(85,750)	(26,546)
Net (decrease) increase in cash and cash equivalents	(22,241)	77,743
Effect of foreign exchange on cash and cash equivalents	4,605	474
Cash and cash equivalents, beginning of year	100,021	21,804
Cash and cash equivalents, end of year	$ 82,385	$ 100,021

Operating Activities

Operating cash generated during the year ended December 31, 2022 is higher than that of the prior year mainly corresponding with the growth in revenue.

Financing Activities

The Corporation repaid $8,000,000 (December 31, 2021 - $17,000,000) on its term loan facility during the year ended December 31, 2022. On June 21, 2022 the Corporation completed a drawdown on its revolving facility of $10,000,000 (December 31, 2021 - $nil) to acquire investments.

Distributions on the Corporation's preferred securities totaled $3,346,000 (December 31, 2021 - $5,000,000) for the year ended December 31, 2022 including interest and other cash payments, which fully satisfied the Corporation's interest and other obligations under its preferred security indenture. Fairfax Financial Holdings Limited ("Fairfax") elected to surrender its $100,000,000 holding of the Corporation's preferred securities for cancellation in full satisfaction of the exercise price payable in respect of the Warrants held and exercised by Fairfax.

The Corporation distributed $2,775,000 (December 31, 2022- $1,402,000) to a non-controlling interest holder in the Potash, Genesee and Coal Royalty Limited Partnerships during the year ended December 31, 2022.

During the year ended December 31, 2022, ARR received net cash proceeds of $15,219,000 from an equity offering which closed in the fourth quarter. During the year ended December 31, 2021 ARR received net cash proceeds from its IPO of $98,932,000.

The Corporation paid cash dividends of $13,143,000 to its common shareholders and issued 34,125 common shares valued at $711,000 under the Corporation's Dividend Reinvestment Plan during the year ended December 31, 2022 (December 31, 2021 – paid cash dividends of $9,247,000 and issued 44,643 common shares valued at $700,000).

During the year ended December 31, 2022 the Corporation repurchased and cancelled 268,000 common shares under its normal course issuer bid for a total cost of $4,835,000 (December 31, 2021 – 821,100 common shares for a total cost of $12,943,000). In the prior year, on February 26, 2021, Yamana Gold Inc. exercised 400,000 warrants at an exercise price of $14.00 with an expiry date of May 3, 2021 and the Corporation repurchased these shares for $5,600,000. During the year ended December 31, 2022 the Corporation cash settled stock options and restricted share units for $3,703,000.

Investing Activities

Investing activities for the year ended December 31, 2022 reflect $28,302,000 received from joint ventures as well as taxes paid of $2,113,000 after the redemption of an investment in the GBR joint venture. In the prior year there was cash received of $1,646,000 from a joint venture.

The Corporation acquired additional royalty interests at a cost of $1,529,000 during the year ended December 31, 2022 primarily adding to the Pickett Mountain royalty. The prior year included the purchase of additional potash royalty unit interests primarily in the Esterhazy mine K3 area at a cost of $475,000.

The Corporation used $47,814,000 (December 31, 2021- $17,204,000) in cash to acquire investments during the year ended December 31, 2022. Of this amount, $5,411,000 (December 31, 2021 - $9,557,000) was used to add to the junior equities portfolio and $25,947,000 was used to add to the Corporation's investment in LIORC, $12,573,000 (December 31, 2021 - $639,000) funded a US$10,000,000 investment in the form of common shares in Invert and $3,883,000 was used to fund additional investments in LRC (December 31, 2021 - $7,008,000). On March 9, 2022 the Corporation funded a US$5,000,000 (CAD$6,422,000) investment in the form of a secured convertible note issued by Invert.

During the year ended December 31, 2022 the Corporation indirectly invested $58,583,000 (December 31, 2021 - $35,261,000) in the GBR joint venture which is described in detail under the *Altius Renewable Royalties* section of this MD&A.

The Corporation received $3,416,000 from the sale of junior equity investments during the year ended December 31, 2022 (December 31, 2021 - $25,640,000).

Liquidity

At December 31, 2022 the Corporation had current assets of $104,143,000, consisting of $82,385,000 in cash and cash equivalents (of which $67,855,000 relates to ARR), $14,985,000 primarily in accounts receivable, prepaid expenses and income taxes receivable and $6,773,000 in a loan receivable. Current liabilities of $19,688,000 include the current portion of long-term debt obligations of $8,000,000, accounts payable and income taxes payable. The Corporation's major sources of free cash flow are from royalty income and streaming revenue, cash receipts from royalty partnership interests, sales of direct and indirect exploration investments and investment income. The Corporation monetized certain portfolio investments during the year ended December 31, 2022 and generated $3,416,000 in cash. At December 31, 2022 the Corporation has approximately $93,000,000 of available liquidity under its amended revolving credit facility.

Summary of Quarterly Financial Information

The table below outlines select financial information related to the Corporation's attributable royalty revenue, adjusted EBITDA, adjusted operating cash flow, adjusted net earnings, net earnings (loss) and per share amounts for the most recent eight quarters. The financial information is extracted from the Corporation's consolidated financial statements and should be read in conjunction with those statements and the annual audited consolidated financial statements. Please refer to the non-GAAP financial measures reconciliation with respect to the below table.

In Thousands of Canadian Dollars, except per share amounts	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022
Revenue per consolidated financial statements	$ 21,654	$ 25,900	$ 27,406	$ 27,087
Attributable royalty revenue (1)	23,122	26,235	28,622	25,492
Adjusted EBITDA (1)	18,000	23,695	24,373	23,585
Adjusted operating cash flow (1)	19,224	25,868	16,597	14,227
Net earnings attributable to common shareholders	6,476	10,712	8,213	12,088
Attributable royalty revenue per share (1)	$ 0.49	$ 0.55	$ 0.61	$ 0.62
Adjusted EBITDA per share (1)	0.38	0.50	0.52	0.57
Adjusted operating cash flow per share (1)	0.40	0.54	0.35	0.35
Net earnings per share				
- basic	0.14	0.22	0.18	0.29
- diluted	0.13	0.22	0.17	0.28

In Thousands of Canadian Dollars, except per share amounts	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Revenue per consolidated financial statements	$ 22,625	$ 20,357	$ 21,198	$ 17,502
Attributable royalty revenue (1)	23,456	20,808	21,906	17,760
Adjusted EBITDA (1)	17,748	16,900	17,712	14,590
Adjusted operating cash flow (1)	15,873	18,902	5,830	8,810
Net earnings (loss) attributable to common shareholders	2,801	9,947	15,611	11,663
Attributable royalty revenue per share (1)	$ 0.57	$ 0.50	$ 0.53	$ 0.43
Adjusted EBITDA per share (1)	0.43	0.41	0.43	0.35
Adjusted operating cash flow per share (1)	0.38	0.46	0.14	0.21
Net earnings per share				
- basic	0.07	0.24	0.38	0.28
- diluted	0.07	0.23	0.36	0.28

(1) Non-GAAP financial measures are reconciled and described in the Non-GAAP Financial Measures section of this MD&A

Adjusted EBITDA is derived primarily from the high margin royalty business, which includes attributable royalty and streaming revenue from 11 producing mines, all net of G&A and operating costs. Attributable royalty revenue is contingent on many factors, including commodity prices, mine production levels, mine sequencing, maintenance schedules and the timing of concentrate shipments, which in some cases are affected by seasonality and outside events. Adjusted operating cash flow is derived from cash flow from operations and adjusted to include distributions from joint ventures on the basis that the joint venture cash flows form part of our royalty business. The change in adjusted operating cash flow is generally consistent with royalty revenue as well as interest and taxes paid. During the current year and prior year attributable revenue and adjusted EBITDA were positively impacted by higher overall commodity prices.

Net earnings (loss) are affected primarily by revenue net of operating expenses as noted above but are also affected by the realization of both cash and non-cash gains or losses on the Corporation's investments, mineral properties and mineral exploration alliances and the equity accounting of some investments, and therefore adjusted net earnings represents the removal of any one time impacts as well as unrealized gains/losses. Net earnings (loss) for the periods reflect the trends in commodity prices discussed above, as well as the impact of non-cash impairment charges recognized in 2021. See Financial Performance and Results of Operations for further discussion.

Commitments and Contractual Obligations

The Corporation has obtained various mineral rights in Canada, the United States, and Australia by staking claims and paying refundable security deposits. On these lands, certain expenditures are required on an annual basis from the date of license issuance in order to maintain the licenses in good standing, and for security deposits thereon. On or before the anniversary date of license issuance, and if the required expenditures are not met, the Corporation has the option of reducing claims on a property, posting a refundable security bond for the deficient amount or electing to allow title of the license to be cancelled. In aggregate, the Corporation is required to spend an additional $1,521,000 by December 31, 2023, of which $990,000 is required spending by partners, in order to maintain its existing licenses in good standing.

As at December 31, 2022 the following principal repayments for the Corporation's credit facilities are required over the next three calendar years:

In Thousands of Canadian Dollars	Term	Revolver	Total
2023	8,000	-	8,000
2024	8,000	-	8,000
2025	24,000	81,877	105,877
	$ 40,000	$ 81,877	$ 121,877

The Corporation has committed to pay, on the anniversary date of November 1, a limited royalty to McChip Resources Inc. of $500,000 per year for the next five years based on a minimum production and grade threshold at the Rocanville mine. The 2022 payment was made in the fourth quarter of 2022.

The Corporation is committed under leases on office space including operating costs for future minimum lease payments of $168,000 per annum until the lease expires in August 2026.

Related Party Transactions

In Thousands of Canadian Dollars	Year ended December 31, 2022	Year ended December 31, 2021
Key management personnel and directors		
Salaries and benefits	$ 3,185	$ 3,130
Share-based compensation	2,992	2,656
Total	$ 6,177	$ 5,786

In Thousands of Canadian Dollars	Year ended December 31, 2022	Year ended December 31, 2021
General and adminstrative expenses billed (to) from		
Associates	$ (48)	$ 24
Joint venture	42	110
Total	$ (6)	$ 134

Key management personnel include those persons having authority and responsibility for planning, directing and controlling the activities of the Corporation as a whole. The Corporation has determined that key management personnel consist of members of the Corporation's Board of Directors and five corporate officers, including the Corporation's Executive Chairman, Chief Executive Officer and Chief Financial Officer, as well as two Vice Presidents reporting directly to a corporate officer.

These transactions are in the normal course of operations and are measured at fair value, which is the amount of consideration established and based on the prevailing market rates. It is management's estimation that these transactions were undertaken under the same terms and conditions as would apply to transactions with non-related parties.

Critical Accounting Estimates

The preparation of financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities and the reported amounts of revenues and expenses during the reporting period. Areas requiring the use of management estimates include rates for amortization and depletion of the royalty and streaming interests, deferred income taxes, the carrying value and assessment of impairment of mining and other investments, investments in joint ventures and royalty interests, the assumptions used in the determination of the fair value of share based compensation and the assumptions used in the determination of the fair value measurement and valuation process for investments in which there is no publicly traded market including key inputs, significant unobservable inputs and the relationship and sensitivity of those inputs to fair value. Refer to Note 3 in the financial statements for detailed descriptions.

New Accounting Policies

The Corporation has not adopted any new accounting policies during the year ended December 31, 2022.

Internal Control over Financial Reporting

Management is responsible for the establishment and maintenance of a system of internal control over financial reporting. This system has been designed to provide reasonable assurance that assets are safeguarded and that the financial reporting is accurate and reliable. The certifying officers have evaluated the effectiveness of the Corporation's internal control over financial reporting as of December 31, 2022 and have concluded that such controls are adequate and effective to ensure accurate and complete financial reporting in public filings. The consolidated financial statements have been prepared by management in accordance with IFRS and in accordance with accounting policies set out in the notes to the consolidated financial statements for the year ended December 31, 2022. There has been no change in the Corporation's internal control over financial reporting during the Corporation's year ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, the Corporation's internal control over financial reporting.

Evaluation and Effectiveness of Disclosure Controls and Procedures

The Corporation has established and maintains disclosure controls and procedures over financial reporting. The certifying officers have evaluated the effectiveness of the issuer's disclosure controls and procedures as of December 31, 2022 and have concluded that such procedures are adequate and effective to ensure accurate and complete disclosures in public filings. There are inherent limitations in all control systems and no disclosure controls and procedures can provide complete assurance that no future errors or fraud will occur. An economically feasible control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

Risk Factors and Key Success Factors

An investment in securities of the Corporation involves a significant degree of risk that should be considered prior to making an investment decision. In addition to discussions of key success factors and business issues elsewhere in this MD&A, the investor should refer to the Corporation's Annual Information Form for a detailed listing of all risk factors as well consider the following risk factors.

Geopolitical Risk

The Russian invasion of Ukraine has resulted in losses of life, the displacement of millions of people, and political and economic disruptions on a global scale. As the situation evolves, the Corporation may be exposed to potential risks impacting assets, operations, commodity prices, liquidity and credit or supply chains in the region and globally. The Corporation has seen recent volatility in nickel and potash prices, as a significant portion of the world's supply of these commodities come from the affected regions. The Corporation will continue to monitor the situation as there may be other significant and unforeseen impacts from these events.

COVID-19

In March 2020, the World Health Organization declared a global pandemic related to COVID-19. The impacts on global commerce have been, and are anticipated to continue to be, far-reaching. To date, there has been significant stock market volatility, significant volatility in commodity prices and foreign exchange markets, restrictions on the conduct of business and the global movement of people and the availability of some goods has been constrained. Uncertainty remains surrounding COVID-19 and the extent and duration of the impacts that it may have on our operating partners' ability to operate on forecasted production amounts, on global commodity prices, on operating partners' logistics and supply chains, on the Corporation's employees and on global financial markets.

Credit Facility and Associated Covenants

The Corporation's credit facility is subject to certain restrictive conditions that limit the discretion of management with respect to certain business matters, including financial covenants that require the Corporation to meet certain financial ratios, financial condition tests and other restrictive covenants. A failure to comply with the obligations in the credit facility could result in a default which, if not cured or waived, could result in a termination of the credit facility. The Corporation monitors this risk by analysis of financial results and covenant calculations as well as ongoing communications with creditors.

Leverage Risk

The Corporation's degree of leverage could have adverse consequences for the Corporation, including: limiting the Corporation's ability to obtain additional financing for working capital, debt service requirements, acquisitions and general corporate or other purposes; restricting the Corporation's flexibility and discretion to operate its business; having to dedicate a portion of the Corporation's cash flows from operations to the payment of interest on its existing indebtedness and not having such cash flows available for other purposes including expenditures that are important to its growth and strategies; exposing the Corporation to increased interest expense on borrowings at variable rates; limiting the Corporation's ability to adjust to changing market conditions; and placing the Corporation at a competitive disadvantage compared to its competitors that have less debt. At December 31, 2022, the Corporation had debt of $120,873,000, cash of $82,385,000 including ARR's cash of $67,855,000, and public and private equities valued at $218,210,000 being mainly shares of LIORC and the publicly traded junior equities portfolio. The Corporation mitigates risk associated with leverage by maintaining a level of debt that is conservative relative to the Corporation's yearly cash flows and level of cash and investments. The Corporation's net debt-to-EBITDA levels have declined significantly since 2016 reflecting growth in EBITDA and improving financial position. The Corporation continues to ensure that working capital requirements are maintained by budgeting, monitoring cash flow and ensuring capital allocation strategies are a priority.

Financial Instrument Risk

The Corporation's financial assets and financial liabilities are exposed to various risk factors that may affect the fair value presentation or the amount ultimately received or paid on settlement of its assets and liabilities. The Corporation manages these risks through prudent investment and business decisions, and, where the exposure is deemed too high, the Corporation may enter into derivative contracts to reduce this exposure. The Corporation does not utilize derivative financial instruments for trading or speculative purposes. Hedge accounting is applied only when appropriate documentation and effectiveness criteria are met.

A summary of the major financial instrument risks and the Corporation's approach to the management of these risks are highlighted below.

Credit risk

Credit risk is the risk that a third party might fail to fulfill its performance obligations under the terms of a financial instrument. Credit risk arises from cash and cash equivalents, short-term investments and receivables. The Corporation closely monitors its financial assets, including the receivables from royalty operators who are responsible for remitting royalty income. The operators are established and reputable companies in the mining and mineral sector and as such management does not believe we have a significant concentration of credit risk.

The Corporation's cash and cash equivalents are held in fully segregated accounts and include only Canadian and US dollar instruments. The Corporation does not expect any liquidity issues or credit losses on these instruments.

Foreign currency risk

Certain royalty and streaming revenues are exposed to foreign currency fluctuations, which are denominated and paid in US dollars. The Corporation does not enter into any derivative contracts to reduce this exposure since the receivable is short-term in nature and the expected receivable amount cannot be predicted reliably. The Corporation has a portion of its debt and cash denominated in US dollars. The Corporation does not enter into any derivative contracts to reduce this exposure and has the ability to offset debt with certain US dollar revenues.

Liquidity risk

The Corporation believes that on a long-term basis its revenue generating assets and net working capital position will enable it to meet current and future obligations at the current level of activity. This conclusion could change with a significant change in the operations of the Corporation or as a result of other developments.

Other price risk

The value of the Corporation's mining and mineral related investments is exposed to fluctuations in the quoted market price depending on a number of factors, including general market conditions, company-specific operating performance and the market value of the commodities that the companies may focus on. The Corporation does not utilize any derivative contracts to reduce this exposure. Royalty interests are exposed to fluctuations in commodity prices as well as fluctuations in foreign currency, specifically the US dollar. The Corporation may be unable to sell its entire interest in an investment without having an adverse effect on the fair value of the security due to low trading volumes on some investments. The Corporation does not enter into any derivative contracts to reduce this exposure.

Interest rate risk

The Corporation has debt and is therefore exposed to interest rate risk on liabilities. The Corporation manages this risk by monitoring debt balances, entering into hedging transactions and making discretionary payments. The Corporation entered into a floating to fixed interest rate swap to manage the interest rate risk on a portion of its debt balance (December 2022 - $40 million). The Corporation's cash and cash equivalents may fluctuate in value depending on the market interest rates and the time to maturity of the instruments. The Corporation manages this risk by limiting the maximum term to maturity on invested funds or holding the investments to maturity.

Outstanding Share Data

At March 7, 2023 the Corporation had 47,624,958 common shares outstanding and 894,308 stock options outstanding.

Non-GAAP Financial Measures

Management uses these measures to monitor the financial performance of the Corporation and its operating segments and believes these measures enable investors and analysts to compare the Corporation's financial performance with its competitors and/or evaluate the results of its underlying business. These measures are intended to provide additional information, not to replace International Financial Reporting Standards (IFRS) measures, and do not have a standard definition under IFRS and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. As these measures do not have a standardized meaning, they may not be comparable to similar measures provided by other companies.

The non-GAAP financial measures are reconciled to the most directly comparable IFRS measure in the sections below. Tabular amounts are presented in thousands of Canadian dollars.

Attributable revenue

Attributable revenue is defined by the Corporation as total revenue and other income from the consolidated financial statements plus the Corporation's proportionate share of gross royalty revenue in the joint ventures (the GBR joint venture and Labrador Nickel Royalty Limited Partnership ("LNRLP")). The Corporation's key decision makers use attributable royalty revenue as a basis to evaluate the business performance. The attributable royalty revenue amounts, together with amortization of royalty interests, general and administrative costs and mining tax, are not reported gross in the consolidated statement of earnings (loss) since the royalty revenues are being generated in joint ventures in accordance with IFRS 11 Joint Arrangements which requires net reporting as an equity pick up. Management uses this measure to reflect the Corporation's economic interest in its operations prior to the application of equity accounting to help allocate financial resources and provide investors with information that it believes is useful in understanding the scope of its business, irrespective of the accounting treatment.

Attributable royalty revenue per share is calculated using attributable royalty revenue as numerator divided by the basic weighted average number of shares for the period as the denominator.

The table below reconciles attributable revenue to revenue in the consolidated financial statements.

In Thousands of Canadian Dollars	Three months ended			
Attributable revenue	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022
Revenue				
Attributable royalty	$ 23,122	$ 26,235	$ 28,622	$ 25,492
Project generation	134	2,106	9	2,999
Attributable revenue	23,256	28,341	28,631	28,491
Adjust: joint venture revenue	(1,602)	(2,441)	(1,225)	(1,404)
IFRS revenue per consolidated financial statements	$ 21,654	$ 25,900	$ 27,406	$ 27,087
Attributable royalty revenue per share	$ 0.49	$ 0.55	$ 0.61	$ 0.62

In Thousands of Canadian Dollars	Three months ended			
Attributable revenue	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Revenue				
Attributable royalty	$ 23,456	$ 20,808	$ 21,906	$ 17,760
Project generation	96	-	-	408
Attributable revenue	23,552	20,808	21,906	18,168
Adjust: joint venture revenue	(927)	(451)	(708)	(666)
IFRS revenue per consolidated financial statements	$ 22,625	$ 20,357	$ 21,198	$ 17,502
Attributable royalty revenue per share	$ 0.57	$ 0.50	$ 0.53	$ 0.43

Adjusted operating cash flow

Adjusted operating cash flow is defined as cash provided (used) in operations in the consolidated financial statements adjusted for inclusion of the Corporation's proportionate share of cash flows from operations from joint ventures. Adjusted operating cash flow is used by management, and management believes this information is used by investors, to analyze cash flows generated from operations and assess the ability of its operations to provide cash or its use of cash, after funding cash capital requirements, to service current and future working capital needs and service debt.

Adjusted operating cash flow per share is calculated using adjusted operating cash flow as the numerator and the basic weighted average number of shares for the period as the denominator.

The tables below reconcile cash provided (used) by for operating activities per the financial statements to adjusted cash operating cash flow:

In Thousands of Canadian Dollars	Three months ended			
Adjusted operating cash flow	**December 31, 2022**	**September 30, 2022**	**June 30, 2022**	**March 31, 2022**
Cash flow from operations	$ 19,021	$ 25,315	$ 16,120	$ 13,804
Adjust: cash received from joint ventures	203	553	477	423
Adjusted operating cash flow	$ 19,224	$ 25,868	$ 16,597	$ 14,227
Adjusted operating cash flow per share	$ 0.40	$ 0.54	$ 0.35	$ 0.35

In Thousands of Canadian Dollars	Three months ended,			
Adjusted operating cash flow	**December 31, 2021**	**September 30, 2021**	**June 30, 2021**	**March 31, 2021**
Cash flow from operations	$ 15,535	$ 18,362	$ 5,332	$ 8,540
Adjust: cash received from joint ventures	338	540	498	270
Adjusted operating cash flow	$ 15,873	$ 18,902	$ 5,830	$ 8,810
Adjusted operating cash flow per share	$ 0.38	$ 0.46	$ 0.14	$ 0.21

Adjusted EBITDA

Adjusted EBITDA is defined by the Corporation as net earnings (loss) before taxes, amortization, interest, non-recurring items, non-cash amounts such as impairment, losses and gains, and share based compensation. The Corporation also adjusts earnings in joint ventures (the GBR joint venture and LNRLP) to reflect our proportionate share of EBITDA on those joint ventures assets which exclude amortization of royalty interests as well as adjusting for any one time items. Adjusted EBITDA is a useful measure of the performance of our business, especially for demonstrating the impact that EBITDA in joint ventures have on the overall business. Management uses adjusted EBITDA as a proxy for the cash generated in a given period that will be available to fund the Corporation's future operations, growth opportunities, shareholder dividends and to service debt obligations as well as to provide a level of comparability to similar entities. Management believes adjusted EBITDA provides useful information to investors in evaluating the Corporation's operating results in the same manner as Management and the Board of Directors.

Adjusted EBITDA per share is calculated using adjusted EBITDA as the numerator and the basic weighted average number of shares for the period as the denominator.

Adjusted EBITDA margin is calculated using adjusted EBITDA as the numerator and attributable revenue as the denominator.

The table below reconciles net earnings (loss) per the financial statements to adjusted EBITDA:

In Thousands of Canadian Dollars	Three months ended			
Adjusted EBITDA	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022
Earnings before income taxes	$ 10,059	$ 13,585	$ 12,136	$ 16,076
Addback (deduct):				
Amortization and depletion	5,916	5,423	6,359	6,594
Exploration and evaluation assets abandoned or impaired	55	-	29	-
Share based compensation	886	860	1,181	481
Interest on long-term debt	2,216	1,852	1,498	1,453
Realized loss (gain) on disposal of derivatives	657	91	(32)	-
Unrealized (gain) loss on fair value adjustment of derivatives	(1,008)	(843)	1,920	313
Share of earnings and impairment reversal in associates	7	-	-	-
Earnings from joint ventures	785	(1,419)	(572)	(629)
LNRLP EBITDA [1]	339	277	365	499
GBR EBITDA [2]	287	1,673	418	333
Foreign exchange loss (gain)	(1,029)	2,196	1,071	(539)
Gain on disposal of mineral property	(1,170)	-	-	(996)
Adjusted EBITDA	$ 18,000	$ 23,695	$ 24,373	$ 23,585
Adjusted EBITDA per share	$ 0.38	$ 0.50	$ 0.52	$ 0.57
(1) LNRLP EBITDA				
Revenue	$ 431	$ 352	$ 462	$ 632
Mining taxes	(86)	(70)	(92)	(127)
Admin charges	(6)	(5)	(5)	(6)
LNRLP Adjusted EBITDA	$ 339	$ 277	$ 365	$ 499
(2) GBR EBITDA				
Revenue	$ 1,171	$ 2,089	$ 763	$ 770
Operating income (expenses)	(884)	(416)	(345)	(437)
GBR Adjusted EBITDA	$ 287	$ 1,673	$ 418	$ 333

In Thousands of Canadian Dollars	Three months ended			
Reconciliation to IFRS measures Adjusted EBITDA	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Earnings before income taxes	$ 4,234	$ 10,774	$ 16,478	$ 13,688
Addback(deduct):				
Amortization and depletion	6,295	6,191	5,603	4,824
Exploration and evaluation assets abandoned or impaired	-	-	2,889	-
Share based compensation	698	611	993	716
Interest on long-term debt	1,510	2,009	1,488	1,817
Gain on disposal of investments	-	-	(1,076)	-
Realized gain on disposal of derivatives	(1,675)	(3,370)	-	-
Unrealized loss (gain) on fair value adjustment of derivatives	1,141	2,273	975	(4,224)
Dilution gain on issuance of shares in associates and joint venture	(1)	(206)	(15)	(358)
Share of loss (earnings) and impairment in associates	(2)	-	165	(1,426)
(Earnings) loss from joint ventures	(132)	189	190	133
LNRLP EBITDA(1)	497	346	512	504
GBR EBITDA(2)	(208)	(360)	(487)	(455)
Impairment of goodwill	6,031	-	-	-
Foreign currency loss (gain)	(145)	690	(446)	(629)
Gain on disposal of mineral property	(495)	(2,247)	(1,962)	-
Gain on reclassification of associate	-	-	(7,595)	-
Adjusted EBITDA	$ 17,748	$ 16,900	$ 17,712	$ 14,590
Adjusted EBITDA per share	$ 0.43	$ 0.41	$ 0.43	$ 0.35
(1) LNRLP EBITDA				
Revenue	$ 628	$ 429	$ 653	$ 631
Mining taxes	(131)	(86)	(130)	(126)
Admin charges	-	3	(11)	(1)
LNRLP Adjusted EBITDA	$ 497	$ 346	$ 512	$ 504
(2) GBR EBITDA				
Revenue	$ 299	$ 22	$ 55	$ 35
Operating income (expenses)	(507)	(382)	(542)	(490)
GBR Adjusted EBITDA	$ (208)	$ (360)	$ (487)	$ (455)

Adjusted net earnings

The Corporation defines adjusted net earnings (loss) as net earnings (loss) per the financial statements less items not reflective of operational performance. These adjusting items include, but are not limited to, impairment charges, gains and losses on the acquisition or disposal of investments or other assets, foreign exchange gains and losses, gains and losses on derivatives and other one-time adjustments as required. While some adjustments are recurring (such as foreign exchange (gain) loss and revaluation of derivatives), management believes that they do not reflect the Corporation's operational performance or future operational performance. Management uses these measures internally and believes that they provide investors with performance measures with which to assess the Corporation's core operations by adjusting for items or transactions that are not reflective of its core operating activities.

Adjusted net earnings/loss per share calculated using adjusted net earnings as the numerator and the basic weighted-average number of shares for the period.

The tables below reconcile net earnings (loss) and net earnings (loss) per share, both per the financial statements, to adjusted net earnings (loss) and adjusted net earnings (loss) per share.

In Thousands of Canadian Dollars	Three months ended			
Adjusted Net Earnings	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022
Net earnings attributable to common	$ 6,476	$ 10,712	$ 8,213	$ 12,088
Addback (deduct):				
Unrealized (gain) loss on fair value adjustment of derivatives	(1,008)	(843)	1,920	313
Foreign exchange loss (gain)	(1,029)	2,196	1,071	(539)
Realized loss (gain) on disposal of derivatives	716	-	-	-
Gain on disposal of mineral property	(1,170)	-	-	(996)
Non-recurring other income	-	(2,070)	-	(2,879)
Tax impact	701	(223)	(617)	841
Adjusted net earnings	$ 4,686	$ 9,772	$ 10,587	$ 8,828
Adjusted net earnings per share	$ 0.10	$ 0.20	$ 0.23	$ 0.21

In Thousands of Canadian Dollars	Three months ended			
Adjusted Net Earnings	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Net earnings (loss) attributable to common	$ 2,801	$ 9,947	$ 15,612	$ 11,663
Addback (deduct):				
Unrealized loss (gain) on fair value adjustment of derivatives	1,141	2,273	975	(4,224)
Foreign exchange loss (gain)	(145)	690	(446)	(629)
Impairment of royalty interest and goodwill	6,031	-	2,889	-
Realized gain on disposal of derivatives	(1,675)	(3,370)	(1,076)	-
Gain on disposal of mineral property	(495)	(2,247)	(1,962)	-
Debt extinguishment costs	-	654	-	-
Gain on equity investments and joint ventures (1)	-	-	(7,445)	(1,784)
Tax impact	273	440	993	1,097
Adjusted net earnings	$ 7,931	$ 8,387	$ 9,540	$ 6,123
Adjusted net earnings per share	$ 0.19	$ 0.20	$ 0.23	$ 0.15

(1) *Includes the following items from the consolidated statement of net earnings (loss): (loss) earnings from joint ventures, gain on loss of control of subsidiary, dilution gain on issuance of shares by an associate and joint venture, and gain on reclassification of an associate.*

Appendix 1 – Summary of Producing Royalties and Streaming Interests

Mine / Project	Primary Commodity	Operator	Revenue Basis
Chapada	Copper	Lundin Mining	3.7% of payable copper stream
Genesee	Coal (Electricity)	Westmoreland/Capital Power Corporation	Tonnes x indexed multiplier
Rocanville	Potash	Nutrien	Revenue
Allan	Potash	Nutrien	Revenue
Cory	Potash	Nutrien	Revenue
Patience Lake	Potash	Nutrien	Revenue
Vanscoy	Potash	Nutrien	Revenue
Esterhazy	Potash	Mosaic	Revenue
Voisey's Bay	Nickel, Copper, Cobalt	Vale	0.3% GSR on 50% of gross metal value
IOC	Iron	Iron Ore Company of Canada	7% Gross Overriding Royalty ("GOR")(1)
Carbon Development	Potash, other	Various	Revenue

(1) Held indirectly through common shares of Labrador Iron Ore Royalty Corporation

Appendix 2 – Summary of Exploration and Pre-Development Stage Royalties

PRE-FEASIBILTY/FEASIBILITY/DEVELOPMENT				
Property	**Primary Commodity**	**Explorer/Developer**	**Royalty Basis**	**Status**
Kami (Labrador)	Iron	Champion Iron Limited	3% GSR	Updated feasibility study expected by Q2 2023
Curipamba (Ecuador)	Copper	Adventus Mining Corporation	2% NSR	Feasibility study completed, updated mineral resources announced and financing secured
Tres Quebradas (3Q) (Argentina)	Lithium	Zijin Mining Group Co., Ltd.	0.1% GSR	Definitive feasibility study ongoing
Grota do Cirilo (Brazil)	Lithium	Sigma Lithium Resources	0.1% GOR(1)	Construction initiated; Q4 2022 production planned
Mariana Lithium Project (Argentina)	Lithium	Ganfeng Lithium	10% of 0.5% NSR	Construction initiated
Telkwa (British Columbia)	Met Coal	Allegiance Coal Limited	1.5-3% price based sliding scale GSR	Definitive feasibility study completed and permitting underway
Gunnison	Copper	Excelsior Mining Corp.	1.625% GSR	Pre-feasibility study updated, field trials planned
Silicon (Nevada)	Gold	Anglo Gold Ashanti NA	1.5% NSR	Pre-feasibility study underway

ADVANCED EXPLORATION				
Property	**Primary Commodity**	**Explorer/Developer**	**Royalty Basis**	**Status**
Stellar (Alaska)	Copper	PolarX Ltd.	2% NSR on gold, 1% NSR on base metals	Resource delineation
Labrador West Iron Ore (Labrador)	Iron Ore	High Tide Resources Corp.	2.75% GSR on iron ore; 2.75% NSR on all other minerals	Resource delineation
Pickett Mountain (Maine, USA)	Zinc, lead, copper, silver	Wolfden Resources Corp	1.35% GSR	Preliminary Economic Assessment
Lappvattnet, Rormyrberget (Sweden)	Copper, Cobalt, Nickel, PGE	Gungnir Resources Inc.	Option to aquire 2.0% GSR	Resource delineation

(1)Net of mandatory government and social contribution deductions from gross sales

EXPLORATION				
Property	Primary Commodity	Explorer or Developer	Royalty Basis	Status
Llano del Nogal (Mexico)	Copper	Riverside Resources Inc.	1.5% NSR on PM; 1.0% NSR on BM	Early-stage exploration
Cuale (Mexico)	Copper	Rockstar Mining, S.A. de C.V.	1.5% NSR on PM; 1.0% NSR on BM	Early-stage exploration
Jupiter (Nevada)	Gold	Orogen Royalties Inc.	1.0% NSR	Early-stage exploration
Stellar (Alaska)	Copper	PolarX Ltd.	2% NSR on gold, 1% NSR on base metals	Exploration
Metastur (Spain)	Cobalt	Technology Metals (Asturmet Recursos S.L)	1.5% NSR	Exploration
Arcas (Chile)	Copper	AbraSilver Resource Corp.	0.98% GSR	Exploration
Copper Range (Michigan)	Copper	N/A	Option to acquire 1% NSR held by a third party	Exploration
Adeline Copper (Newfoundland)	Copper	Chesterfield Resources Plc.	1.6% GSR	Exploration
Central Mineral Belt (Labrador)	Copper, Uranium	Paladin Energy Ltd	2% NSR on all minerals except uranium	Exploration
CMB (Labrador)	Copper, Uranium	Labrador Uranium Inc.	2% GSR	Exploration
La Coipita (Argentina)	Copper, Gold	AbraSilver Resource Corp.	Option to acquire 1.1% NSR for US$3M	Exploration
Knaften (Sweden)	Copper, Gold	Gungnir Resources Inc.	Option to acquire 1.0% GSR	Exploration
Mythril (Quebec)	Copper, Gold, Lithium	Midland Exploration Inc	1% NSR	Exploration
Cape Ray (Regional) (Newfoundland)	Gold	Cape Ray Mining Limited	2% NSR	Exploration
Elrond, Helm's Deep, Fangorn (Quebec)	Gold	Midland Exploration Inc	1% NSR	Exploration
Gibson (British Columbia)	Gold	Canex Metals Inc	Option to acquire a 1.5% NSR	Exploration
Golden Baie (Newfoundland)	Gold	Canstar Resources Inc.	2% NSR	Exploration
Golden Rose (Newfoundland)	Gold	Tru Precious Metals Corp	2% NSR	Exploration
Hermitage (Newfoundland)	Gold	Canstar Resources Inc.	2% NSR	Exploration

EXPLORATION (Continued)				
Property	Primary Commodity	Explorer or Developer	Royalty Basis	Status
White Bay (Newfoundland)	Gold	Churchill Resources Inc.	1.6 % GSR	Exploration
Viking (Newfoundland)	Gold	Magna Terra Minerals Inc.	2% NSR, plus 1-1.5% royalties on surrounding lands	Exploration
Moosehead (Newfoundland)	Gold	Sokoman Minerals Corp	2% NSR	Exploration
Wilding Lake, Crystal Lake, Intersection (Newfoundland)	Gold	Canterra Minerals Corporation	2% NSR	Exploration
Cuprite (Nevada)	Gold	Strikepoint Gold Inc.	1.5% NSR	Exploration
Humalite (Alberta)	Humalite (coal)	Creative Business Solutions	1-2% sliding scale GOR	Exploration
Iron Horse (Labrador)	Iron	Sokoman Minerals Corp	1% GSR; option to acquire additional 1.1% GSR	Exploration
Florence Lake (Labrador)	Nickel	Churchill Resources Inc.	1.6% GSR	Exploration
Moria (Quebec)	Nickel	Midland Exploration Inc	1% NSR	Exploration
Taylor Brook (Newfoundland)	Nickel	Churchill Resources Inc.	1.6% GSR	Exploration
Voyageur (Michigan)	Nickel	N/A	2% NSR	Exploration
Sail Pond (Newfoundland)	Silver, Copper	Sterling Metals Corp.	2% NSR	Exploration
Notakwanon (Labrador)	Uranium	Labrador Uranium Inc.	2% GSR	Exploration
Buchans (Newfoundland)	Zinc	Canstar Resources Inc	2% NSR	Exploration
Kingscourt, Rathkeale, Fermoy (Republic of Ireland)	Zinc	South 32 Base Metals Ireland	2% NSR on each Project	Exploration
Lismore (Republic of Ireland)	Zinc	BMEx Ltd	2% NSR	Exploration
Midland (Ireland)	Zinc	BMEx Ltd	1% GSR	Exploration
Point Leamington (Newfoundland)	Zinc	Callinex Mines Inc.	2% NSR	Exploration
Shire (Quebec)	Zinc, Lithium	Midland Exploration Inc	1% NSR	Exploration
Sulieman (Australia)	Zinc	Rio Tinto Exploration Pty Limited	1% NSR for first 10 years of production	Exploration
Pine Bay (Manitoba)	Copper, zinc, gold and silver	Callinex Mines Inc.	Option to acquire 0.5% NSR	Exploration

Appendix 3 – Summary of ARR's Operational, Construction and Development Renewable Energy Royalties

Project	Location	Project Seller	Renewable Energy Source	Project Owner/Developer	Facility Size (MWac)	Grid Connection	Status	Expected COD[3]	Royalty Basis
Prospero 2	Andrews County, Texas (USA)	-	Solar	Longroad Energy	250	ERCOT	Operational	N/A	Variable[1]
JayHawk	Crawford and Bourboun County, Kansas (USA)	Apex	Wind	WEC Energy / Invenergy	195	SPP	Operational	N/A	2.5% of revenue
Old Settler[2]	Floyd County, Texas (USA)	-	Wind	Northleaf Capital	150	ERCOT	Operational	N/A	Variable[1]
Cotton Plains[2]	Floyd County, Texas (USA)	-	Wind	Northleaf Capital	50	ERCOT	Operational	N/A	Variable[1]
Young Wind	Texas (USA)	Apex	Wind	NextEra Energy Resources	500	ERCOT	Operational	N/A	2.5% of revenue
Appaloosa	Upton County, Texas (USA)	TGE	Wind	NextEra Energy Resources	175	ERCOT	Operational	N/A	1.5% of revenue
Undisclosed Hansford County	Texas (USA)	TBA	Wind	TBA	658	TBA	Operational	N/A	Fixed
Phantom[2]	Bell County, Texas (USA)	-	Solar	Northleaf Capital	15	DND	Operational	N/A	Variable[1]
Titan Solar	California (USA)	Sunpin	Solar	Longroad Energy	70	CAISO	Operational	N/A	Variable[1]
Clyde River	Orleans County, Vermont (USA)	-	Hydro	Gravity Renewables	5	ISO New England	Operational	N/A	10% of revenue
El Sauz	Willacy County, Texas (USA)	Apex	Wind	JERA Renewables	300	ERCOT	Construction	Q1 2023	2.5% of revenue

1. Royalties with variable rates adjust under certain conditions, guaranteeing a minumum return threshold under certain timelines, after which a lower royalty percentage is applied

2. While Old Settler Wind Project, Cotton Plains Wind Project, and Phantom Solar Project are three separate projects, GBR's investment was under one agreement, which includes the three projects as a single portfolio

3. Commercial Operations Date (COD) estimated from public information, project originators, and project owners. Dates are subject to change.

Project[3]	Location	Renewable Energy Source	Project Owner/Developer	Facility Size (MWac)	Grid Connection	Status	Expected COD[2]	Royalty Basis
Blackford Wind	Indiana	Wind	Leeward	200	PJM	Development	Q4 2023	3% of revenue
Water Valley Wind	Texas	Wind	Enbridge	150	ERCOT	Development	2023	3% of revenue
Vermillion Grove Wind	Illinois	Wind	Enbridge	255	PJM	Development	2023	3% of revenue
Canyon[1]	Texas	Wind	TBA	360	ERCOT	Development	Q4 2024	2.5% sliding scale
Panther Grove 1	Illinois	Wind	Copenhagen Infastructure Partners	400	PJM	Development	2024	3% of revenue
Hoosier Line	Indiana	Wind	Leeward	180	PJM	Development	2024	3% of revenue
Sugar Loaf Wind	Nebraska	Wind	Enbridge	150	SPP	Development	2024	3% of revenue
Shannon Wind	Illinois	Wind	Enbridge	150	PJM	Development	2024	3% of revenue
Wyoming I	Wymoning	Wind	Enbridge	250	WECC	Development	2025	3% of revenue
Easter	Texas	Wind	Enbridge	300	SPP	Development	2025	3% of revenue
Cone/Crosby III	Texas	Wind	Enbridge	300	SPP	Development	2026	3% of revenue

1. Facility size may be completed in phases

2. Expected COD based on Enbridge release on January 31, 2023

3. Project Seller: TGE

Project[4]	Location	Renewable Energy Source	Project Owner/Developer	Facility Size (MWac)	Grid Connection	Status	Expected COD[2]	Royalty Basis
Lawrence Solar	Pennsylvania	Solar	Enbridge	175	PJM	Development	2023	1.5% of revenue
Cadillac Solar - El Dorado	Texas	Solar	Enbridge	400	ERCOT	Development	2023	1.5% of revenue
Blackford Solar	Indiana	Solar	Leeward	150	PJM	Development	Q1 2024	1.5% of revenue
Cadillac Solar - Deville	Texas	Solar	Enbridge	350	ERCOT	Development	2024	1.5% of revenue
Gloucester Solar	Virginia	Solar	Enbridge	150	PJM	Development	2024	1.5% of revenue
Vermillion Solar	Illinois	Solar	Enbridge	150	PJM	Development	2024	1.5% of revenue
Honey Creek[1]	Indiana	Solar	Leeward	400	PJM	Development	2024	1.5% of revenue
Flatland	Texas	Solar	TBA	180	ERCOT	Development	Q4 2025	1.5% of revenue equiv[3]
3 Early Stage TGE Projects	Western USA	Solar	Enbridge	1011	WECC	Development	TBA	1.5% of revenue

1. Facility size may be completed in phases

2. Expected COD based on Enbridge release on January 31, 2023

3. Flatland payments fixed equivalent to 1.5%, see ARR press release dated June 29, 2022

4. Project Seller: TGE