



**ALEXCO RESOURCE CORP.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS**

**FOR THE YEAR ENDED DECEMBER 31, 2021**

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This Management's Discussion and Analysis ("MD&A") of Alexco Resource Corp. ("Alexco" or the "Corporation") is dated March 21, 2022 and provides an analysis of Alexco's consolidated financial results for the year ended December 31, 2021 ("FY 2021") compared to the year ended December 31, 2020 ("FY 2020"). This MD&A will also refer to certain periods including the fourth quarter of 2021 ("Q4 2021"), the third quarter of 2021 ("Q3 2021"), the second quarter of 2021 ("Q2 2021"), the first quarter of 2021 ("Q1 2021"), the fourth quarter of 2020 ("Q4 2020"), and the year ended December 31, 2019 ("FY 2019").

The following information should be read in conjunction with the Corporation's December 31, 2021 consolidated financial statements with accompanying notes, which have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board. These documents and additional information on the Corporation are available on the Corporation's website at [www.alexcoresource.com](http://www.alexcoresource.com), the SEDAR website at [www.sedar.com](http://www.sedar.com) and the Edgar website at [www.sec.gov](http://www.sec.gov).

Except where specifically indicated otherwise, the disclosure in this MD&A of scientific and technical information regarding exploration projects on Alexco's mineral properties has been reviewed and approved by Alan McOnie, FAusIMM, while that regarding mine development, operations and mineral resources has been reviewed and approved by Sebastien D. Tolgyesi, P.Eng., P.Geo., Keno Hill Operations Manager, both of whom are Qualified Persons as defined by National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101").

All dollar figures are expressed in Canadian dollars unless otherwise stated.

## **1. FOURTH QUARTER AND FULL YEAR 2021 HIGHLIGHTS**

### **Corporate**

- The Corporation reported revenues net of Wheaton streaming payments of \$21,502,000 for FY 2021 compared to \$2,866,000 for FY 2020. The Corporation reported revenues of \$3,267,000 for Q4 2021 compared to \$633,000 for Q4 2020. Revenue in Q4 2021 was \$2,814,000 and primarily derived from concentrate sales from ore sourced from the Bellekeno and Birmingham mines. In Q4 2021, the Corporation recognized reclamation management revenue of \$453,000.
- The Corporation reported a net loss of \$3,146,000 for FY 2021 compared to \$31,234,000 for FY 2020. The Corporation reported a net loss of \$9,069,000 for Q4 2021 compared to \$15,817,000 for Q4 2020. The net loss in Q4 2021 was primarily related to reduced revenue associated with the intermittent shut down of milling activities to accommodate the "milling out" of final ore from the Bellekeno mine, along with the completion of mechanical and electrical work to optimize plant throughput and concentrate quality with the switch to processing ore from the new Birmingham and Flame & Moth mines. To an extent, the intermittent nature of operations in Q4 2021 was also driven by reduced workforce availability arising from COVID-19 isolation requirements. The net loss for Q4 2020 was primarily attributed to a non-cash fair value loss on the embedded derivative asset related to the Wheaton Precious Metals Corp. ("Wheaton") silver purchase agreement ("SPA") and mine site maintenance expenditures incurred at the Bellekeno mine.
- The Corporation reported an operating loss of \$19,421,000 for FY 2021 compared to \$22,333,000 for FY 2020. The Corporation reported an operating loss of \$10,646,000 for Q4 2021 compared to \$11,605,000 for Q4 2020. The operating loss for Q4 2021 was primarily related to continuing ramp-up related costs at Keno Hill (as described above) and includes corporate general and administrative expenses of \$4,758,000, of which \$2,387,000 was non-cash costs related to the annual share-based compensation grants to directors, officers and employees and amortization and depreciation expenses. The operating loss for Q4 2020 was primarily related to mine site maintenance expenditures and corporate general and administrative expenses.
- The Corporation's cash and cash equivalents as at December 31, 2021 totaled \$9,933,000 compared to \$23,742,000 as at December 31, 2020, while net working capital totaled \$1,389,000 compared to \$15,353,000 as at December 31, 2020 (see "Non-GAAP Measures"). The Corporation's restricted cash and deposits as at December 31, 2021 totaled \$2,990,000 compared to \$2,932,000 as at December 31, 2020.
- On September 23, 2021, the Corporation and its Offtaker amended the existing offtake agreement to allow for an unsecured revolving credit facility (the "Facility") for up to US\$7,500,000. The Facility allows the Corporation to request prepayments, in US\$1,000,000 increments, which are repaid in five monthly instalments against



future deliveries of concentrate or in cash. The interest rate on drawn amounts is equal to three month LIBOR + 7.05%. The standby fee on undrawn amounts is 1.5% per annum, payable quarterly.

### ***Mine Operations and Exploration***

- Ramp-up of mining and milling operations continued in Q4 2021 in anticipation of reaching sustainable design capacity (400 tonnes per operating day ("tpd")) and cash self-sufficiency in the first half of 2022. Overall, tonnes of ore mined in Q4 2021 decreased by 55% compared to Q3 2021 due to interrupted production activity and a rise in COVID-19 test positive cases at Keno Hill, resulting ultimately in lower production and slower development rates as mining operations transitioned from the Bellekeno mine to the Bermingham and Flame & Moth mines. Some of these curtailments, especially the reduced workforce availability, continued into the first quarter of 2022 ("Q1 2022"). FY 2021 site operations highlights include:
  - At the Bermingham mine, initial ore production was achieved in August 2021 and continued in Q4 2021. By year end, the undercut for the initial longhole stope(s) was largely completed in anticipation of longhole retreat activity in 2022.
  - At the Flame & Moth mine, underground development continued in Q4 2021. The primary ramp reached the first two ore access levels with initial cut and fill ore production commencing in Q1 2022. In addition, the Alimak raise nest was completed allowing for the advancement of the ventilation and secondary escape raise. This raise was completed to surface and establishment of the ladders and services within the raise began in Q1 2022 as scheduled.
  - At the Bellekeno mine, underground mining activity was wound down in October 2021. Upon completion of ore production from the Bellekeno mine in October 2021, salvageable equipment and material was removed and repositioned to the Bermingham and Flame & Moth mines.
  - The Keno District mill operated on a reduced schedule in Q4 2021 (as described previously) allowing the "milling out" of final ore from the Bellekeno mine. Additional optimization and metallurgical adjustments to the mill were made in anticipation of mill ore feed transitioning to a blend of ore between the Bermingham and Flame & Moth mines in Q1 2022.
  - The Corporation capitalized expenditures totaling \$38,554,000 and \$10,771,000 on underground development at the Bermingham and Flame & Moth mines during FY 2021 and Q4 2021, respectively.
- On December 16, 2021, the Corporation reported the balance of the results from its successful 2021 directional drilling program at the Bermingham Northeast Deep zone.

### ***Other Activities***

- On January 4, 2021, the Corporation sold its NSR royalty in Golden Predator's Brewery Creek Project to Wheaton Precious Metals ("Wheaton") for total cash consideration of \$4,500,000.
- On January 28, 2021, the Corporation completed an equity financing and issued 2,053,670 flow-through shares with respect to "Canadian exploration expenses" (the "CEE Shares") priced at \$4.48 per CEE Share, and 651,100 flow-through shares with respect to "Canadian development expenses" (the "CDE Shares") priced at \$3.84 per CDE Share, for aggregate gross proceeds of \$11,700,666.
- On June 10, 2021, the Corporation completed an equity financing and issued 8,214,450 common shares at a price of \$3.50 per share for aggregate gross proceeds of \$28,750,575.

### ***Subsequent to year-end:***

- On January 18, 2022, the Corporation reported the expansion of the Bermingham Indicated Resource (see press release dated January 18, 2022, entitled "Alexco Reports 43% Expansion of Bermingham Indicated Resource to 47 Million Ounces of Silver at 939 Grams per Tonne; Remains Open").
- On January 18, 2022, the Corporation and the Offtaker further amended the Facility, increasing the total prepayments allowed under the Facility from US\$7,500,000 to US\$10,000,000. All other terms of the Facility



remain unchanged. In March 2022, the Corporation received a prepayment in the amount of US\$5,000,000 under the Facility.

- On January 27, 2022, the Corporation completed an equity financing and issued 2,129,685 flow-through shares with respect to "Canadian exploration expenses" priced at \$2.70 per CEE Share, and 1,480,740 flow-through shares with respect to "Canadian development expenses" priced at \$2.33 per CDE Share, for aggregate gross proceeds of \$9,200,274.
- Production of ore from the Bermingham and Flame & Moth mines continued into January and February 2022 but at significantly reduced rates due initially to workforce constraints as described above, followed in February 2022 by equipment availability issues exacerbated by supply line interruptions for critical spares. As a result of operational delays in Q4 2021, which continued into the first two months of 2022, the overall ramp-up plan is running approximately three to four months behind schedule with design capacity expected to be reached in the third quarter of 2022.
- In early March 2022 the Company completed analysis of infill drilling of the initial stoping areas in the Flame & Moth mine resulting in an increase in available ore from approximately 28,900 tonnes at an average grade of 652 grams per tonne ("g/t") silver ("Ag") to 48,900 tonnes at an average grade of 761 g/t Ag, with this additional ore to be extracted in the first half of 2022.

## **2. OVERVIEW OF THE BUSINESS**

The Corporation owns the majority and most prospective part of the historic Keno Hill Silver District ("Keno Hill" or the "District"), located in Canada's Yukon Territory. The Bellekeno silver mine, a high-grade silver operation, commenced commercial production at the beginning of 2011 and was Canada's only operating primary silver mine from 2011 to 2013, producing a total of 5.6 million ("M") ounces ("oz") of silver during the 2010 – 2013 period. In June 2020, the Corporation announced it was moving forward with final development of its mines at Keno Hill, including mining from the Bellekeno, Flame & Moth, and Bermingham deposits. Ore mining from the Bellekeno mine occurred between November 2020 and October 2021. Ore mining from the Bermingham mine commenced August 2021. Ore mining from the Flame & Moth mine commenced January 2022.

Keno Hill lies within the traditional territory of the First Nation of Na-Cho Nyak Dun ("FNNND"). Alexco is party to a Comprehensive Cooperation and Benefits Agreement with the FNNND, setting out common understandings, obligations and opportunities arising from all of Alexco's activities within the District including exploration, care and maintenance, historic District closure activities, and mine production.

Alexco is a public company which is listed on the Toronto Stock Exchange and the NYSE American Equities Exchange (under the symbol AXU).

## **3. BUSINESS DEVELOPMENTS**

### *Updated Mineral Resource Estimate at Bermingham*

On January 18, 2022, the Corporation reported the overall expansion Mineral Resource estimate for the Corporation's Bermingham deposit, increasing the Bermingham Indicated Mineral Resource estimate from 33.0 million ounces ("Moz") to 47.2 Moz of contained silver. The total Bermingham Indicated Mineral Resource estimate was expanded to 1,562,700 tonnes at an average grade of 939 g/t Ag, 2.6% lead ("Pb"), and 1.7% zinc ("Zn") and the Inferred Mineral Resource estimate, included in the Indicated Mineral Resource, was expanded to 843,400 tonnes at an average grade of 735 g/t Ag, 2.0% Pb, and 1.3% Zn.

### *COVID-19*

In March 2020, the World Health Organization declared a global pandemic related to COVID-19. The impacts on global commerce have been far-reaching. There is significant ongoing uncertainty surrounding COVID-19 related to COVID-19 cases at Keno Hill, government mandated workplace and travel restrictions, supply chain interruptions, and recruitment of underground miners and maintenance technicians. In December 2021 and the start of Q1 2022, the Corporation experienced a rise in COVID-19 cases at Keno Hill. The Corporation's COVID-19 response required mandatory self-isolation for affected employees and contractors as dictated by government health protocols, which resulted in reduced workforce availability, significantly reduced production and slower development advancement.



activity in Q4 2021, extending in and through January 2022. The Corporation notes that COVID-19 pandemic risk remains a risk to continued ramp-up and production activities at Keno Hill.

*Property, Plant and Equipment — Proceeds before Intended Use*

On January 1, 2021, the Corporation early adopted *IAS 16, Property, Plant and Equipment: Proceeds before Intended Use*, retrospectively to January 1, 2020. The amended standard prohibits deducting from the cost of mineral properties, plant and equipment amounts received from selling items produced while preparing the asset for its intended use. With the adoption of the amended standard, proceeds from sales of concentrate and related costs while bringing the mine in a condition necessary for it to be capable of operating in the manner intended by management are recognized in profit or loss in accordance with applicable standards. There was no impact of this adoption on the comparative figures presented for the year ended December 31, 2020. As such, the Corporation's revenues and cost of sales from mining operations appear in the Consolidated Statements of Loss and Comprehensive Loss for the years ended December 31, 2021 and 2020, which would otherwise have been deducted from mineral properties, plant and equipment under the original standard. (See "Critical Accounting Policies, Estimates and Judgments").



## 4. RESULTS OF OPERATIONS

Key operational metrics for the periods is summarized as follows:

	Q4 2021	Q3 2021	Q2 2021	Q1 2021	FY 2021
Ore tonnes mined	4,996	11,101	6,464	4,427	26,988
Ore tonnes milled	7,091	7,275	10,896	3,850	29,112
Mill throughput (tonnes per operating day) <sup>1</sup>	253	162	176	107	170
Ore tonnes stockpiled	1,366	3,809	635	5,067	1,366
Underground development meters	195	288	228	172	883
<b>Head grade</b>					
Silver (g/t)	547	778	703	985	720
Lead	3.1%	11.3%	9.3%	11.9%	8.5%
Zinc	2.7%	6.5%	3.1%	3.3%	3.9%
<b>Recoveries</b>					
Silver	96%	95%	93%	83%	92%
Lead in lead concentrate	90%	93%	83%	85%	87%
Zinc in zinc concentrate	62%	65%	85%	31%	67%
<b>Concentrate production and grades</b>					
Lead concentrate produced (tonnes)	351	1,039	1,174	539	3,103
Silver grade (g/t)	10,179	5,089	5,729	5,664	5,996
Lead grade	57%	74%	70%	72%	70%
Zinc concentrate produced (tonnes)	240	588	635	105	1,568
Silver grade (g/t)	568	203	715	775	464
Zinc grade	50%	52%	53%	37%	48%
<b>Contained metal in concentrate produced</b>					
Silver (ounces)	119,177	173,757	227,683	100,984	621,601
Lead (pounds)	436,877	1,683,571	1,799,959	854,346	4,774,753
Zinc (pounds)	262,897	671,606	637,780	86,494	1,658,777
<b>Sales volumes by payable metal<sup>2</sup></b>					
Silver (ounces)	118,924	167,184	207,876	88,523	582,507
Lead (pounds)	453,709	1,650,654	1,725,757	719,178	4,549,298
Zinc (pounds)	275,848	539,458	439,850	60,247	1,315,403
<b>Recognized metal prices<sup>3</sup></b>					
Silver (per ounce)	US\$23.29	US\$25.46	US\$27.14	US\$26.48	US\$25.17
Lead (per pound)	US\$1.05	US\$1.09	US\$0.99	US\$0.92	US\$1.00
Zinc (per pound)	US\$1.62	US\$1.36	US\$1.34	US\$1.24	US\$1.37
<b>Exploration</b>					
Meters drilled (m)	1,393	7,209	8,403	507	17,512
Exploration expenditures incurred – direct and indirect (\$)	1,612,000	3,811,000	4,696,000	1,233,000	11,352,000

1. Mill throughput (tonnes per operating day) is based on the number of days that the mill was operational during the period. The mill was operational for 28 days, 45 days, 62 days and 36 days during Q4, 2021, Q3 2021, Q2 2021 and Q1 2021, respectively.
2. Sales volumes by payable metal represents the volumes of each payable metal sold to the Offtaker, and prior to the 25% of silver that is delivered to Wheaton under the Wheaton SPA. Silver is the only metal deliverable to Wheaton under the Wheaton SPA.
3. Recognized metal prices represent average metal prices for concentrate sales revenue recognized over the period, weighted by dollar of concentrate sales revenue recognized.

During FY 2021, the Corporation mined 26,988 tonnes of ore, of which 6,110 tonnes were attributable to the Bermingham mine and 20,878 tonnes were attributable to the Bellekeno mine. During Q4 2021, the Corporation mined 4,996 tonnes of ore, of which 3,642 tonnes were attributable to the Bermingham mine and 1,354 tonnes were attributable to the Bellekeno mine. Ore mining from the Bellekeno mine was wound down in October 2021. Initial ore production from the Bermingham mine was achieved in August 2021 with year-end grade reconciliation work indicating the initial undercuts to be generally consistent with block model estimates. Underground development activities at the



Flame & Moth mine continued, with initial ore production achieved in January 2022.

During FY 2021, the Corporation milled 29,112 tonnes of ore. During Q4 2021, the Corporation milled 7,091 tonnes of ore. Since initial commissioning in December 2020, the mill has been operating on a modified rotation schedule to match ore production from initially the Bellekeno mine, and latterly from the Bermingham mine. In December 2021 and the start of the first quarter of 2022, the Corporation experienced a rise in COVID-19 cases at Keno Hill. The Corporation's COVID-19 response required mandatory self-isolation for affected employees and contractors as dictated by government health protocols, and along with the transition of mining activity from the Bellekeno mine to the Bermingham and Flame & Moth mines being slower than planned, resulted in a decrease in ore tonnes mined and milled in Q4 2021 relative to Q3 2021. During December 2021, several mill throughput campaigns were completed and the mill reached a peak throughput of 22.5 dry metric tonnes ("dmt") per hour over a sustained period, which is 25% higher than the 18 dmt per hour (equivalent to 400 tonnes per day) design capacity of the mill. Metallurgical performance of the Bermingham ore was 91% silver recovery with an average of 17,076 g/t Ag in the Pb/Ag concentrate. With the increase in silver content in the lead concentrate from Bermingham ore, the contractual payable silver from the Offtaker also increased.

During FY 2021, the Corporation produced 3,103 tonnes of Pb/Ag concentrate with an average grade of 5,996 g/t Ag and 1,568 tonnes of Zn/Ag concentrate with an average grade of 464 g/t Ag. During Q4 2021, the Corporation produced 351 tonnes of Pb/Ag concentrate with an average grade of 10,179 g/t Ag and 240 tonnes of Zn/Ag concentrate with an average grade of 568 g/t Ag. During FY 2021, silver recoveries averaged 92%, with 96% of recovered silver attributable to the Pb/Ag concentrate. During Q4 2021, silver recoveries averaged 96%, with 96% of recovered silver attributable to the Pb/Ag concentrate. The increase in concentrate silver grade in Q4 2021 is related to the improved metallurgical characteristics of the Bermingham ore, which generally has a higher silver to base metal ratio relative to the Bellekeno ore. The increase is also due to mill circuit modifications to enhance silver recoveries.

During FY 2021 and Q4 2021, the Corporation sold the equivalent of 582,507 and 118,924 silver ounces to its Offtaker under the Corporation's offtake agreement, of which 25% of the payable ounces were delivered to Wheaton under the Wheaton SPA.

#### *Exploration*

On December 16, 2021, the Corporation reported the balance of the results from its 2021 directional drilling program at the Bermingham Northeast Deep zone. The drilling program focused at depth northeast of the Bermingham deposit. The 17,742 m drill program completed 52 intercepts through the multi-vein target zone, and outlined a deposit extending approximately 500 m along strike with at least a 100 m vertical extent. The 2021 exploration program provided nominal drill intersection spacings of 35 m along strike by 25 m dip separation along the subparallel Bermingham Main and Bermingham Footwall veins using directional drilling technology, whereby shorter secondary drill-holes were initiated at depth from an existing primary drill-hole. On January 18, 2022, the Corporation reported an updated and expanded Mineral Resource estimate for the Bermingham deposit, increasing the Indicated Mineral Resource estimate from 33.0 Moz to 47.2 Moz of contained silver at an average grade of 939 g/t Ag and increasing the inferred resource from 11.7 Moz to 19.9 Moz at an average grade of 735 g/t Ag.

#### *ERDC*

In parallel with mine operations, Alexco, through its subsidiary Elsa Reclamation & Development Company Ltd. ("ERDC"), continues to advance the reclamation project related to historic environmental disturbances in the District. In addition, as part of Alexco's 2006 acquisition of the United Keno Hill Mines Limited and UKH Minerals Limited ("UKHM") mineral rights in the District, ERDC is retained by the Canadian Government as a paid contractor responsible on a continuing basis for the environmental care and maintenance for the historical environmental liabilities of the former UKHM mineral properties.

ERDC currently holds a Type B Water Use License ("WUL") under the Yukon Waters Act which prescribes the conditions for compliance. ERDC is responsible for carrying out the environmental care and maintenance at various sites within the UKHM mineral rights, for a fixed annual fee established on a per-site basis totaling \$900,000, adjustable for material changes in scope.





## **5. OUTLOOK AND STRATEGY**

### *2022 Production and Development at Keno Hill*

Activities at Keno Hill in early 2022 were meaningfully impacted by reduced workforce availability as a result of mandatory self isolation of employees and contractors as required by COVID 19 regulations. In addition, and especially in February 2022, supply chain interruptions and delays had a negative impact on maintenance activities at site, which reduced the availability of key underground equipment. Taken together, these challenges reduced development rates, ore extraction, and ultimately silver production in the early parts of 2022, with Bermingham and Flame & Moth producing a combined 4,454 tonnes through February 2022. Alexco now estimates that Q1 2022 silver production will be approximately 75,000 to 100,000 ounces with the vast majority of that production occurring in March 2022. Over the course of the last three months the mill has demonstrated that it is more than capable of delivering excellent metallurgical performance while operating at, and even above, its design capacity of 400 tpd. Going forward, delivery of ore from underground to the mill is the key driver for increasing production levels. To that end, longhole ore extraction is continuing at the Bermingham 1150 level, and in March 2022 the Corporation reached the ore at both the 815 and 835 levels at Flame & Moth. With multiple ore faces in two mines operating it is anticipated that ore deliveries in the second quarter of 2022 will improve significantly, which should result in a significant increase to Q2 2022 silver production levels. While risks to our outlook remain elevated, the Corporation estimates that Q2 2022 silver production will range between 450,000 and 550,000 ounces; before increasing to effective "run-rate" levels in the second half of the year. Management intends to provide 2022 silver production guidance on May 12, 2022 when it announces its results for the quarter ended March 31, 2022.

The Corporation remains focused on continuing optimization of underground activities as follows:

- At both the Bermingham and Flame & Moth mines, improving underground cycle times and advance rates in variable ground (quartzite and schist) remains a focus along with continued recruitment, training and retention of miners and maintenance technicians.
- Optimization of drilling and blasting techniques in the initial Bermingham longhole ore stopes to minimize dilution and maximize ore recovery.
- Underground geotechnical drilling to provide additional information to better forecast and respond to variability in ground conditions in development headings.
- Improving underground equipment availability and water management and treatment to enhance underground performance and advance rates.

### *Exploration*

In May 2022 the Corporation intends to commence a 15,000 m surface exploration drilling program primarily stepping out along favourable permissive structural and stratigraphic trends adjacent to the Bermingham deposit. This work will be focused to the west in the vicinity of the Coral Wigwam deposit, and to the northeast towards the Hector-Calumet deposit, as well as broader exploration drilling along other known mineralized structural corridors within the Keno Hill and Galena Hill areas.

### *ERDC*

ERDC currently holds a Type B Water Licence (QZ17-076) under the Waters Act to undertake Care and Maintenance activities, which expires in August 2022. In Q1 2021, ERDC entered an application for a renewal of Water Licence QZ17-076 to undertake the reclamation plan and to replace the current care and maintenance Water Licence (the "UKHM Reclamation Plan"). In Q4 2021, this draft UKHM Reclamation Plan successfully completed the adequacy phase of the application process under the authority of the Yukon Water Board and was declared adequate for public review, with public notification expected in Q1 2022.

### *Economic Climate*

Ag, Pb, and Zn historically are the primary metals found within the District.



## MANAGEMENT'S DISCUSSION AND ANALYSIS

### FOR THE YEAR ENDED DECEMBER 31, 2021

During FY 2021, the average Ag price was US\$25.04 per ounce and traded from a low of US\$21.52 per ounce on September 30, 2021 to a high of US\$29.58 per ounce on February 1, 2021, while Pb traded between US\$0.87 to US\$1.13 per pound and Zn traded between US\$1.16 to US\$1.74 per pound, and the average Canadian-US exchange rate was US0.80 per CAD. As at the date of this MD&A, spot commodity prices are approximately US\$25.00 per ounce for Ag, US\$1.01 per pound for Pb and US\$1.73 per pound for Zn and the Canadian-US exchange rate is approximately US\$0.79 per CAD.

Consensus investment analyst forecasts over the next two years for Ag average approximately US\$23.48 per ounce, while forecasts for Pb and Zn average approximately US\$0.97 per pound and US\$1.32 per pound, respectively. The Canadian-US exchange rate consensus forecast for the next two years is US\$0.79 per CAD (see "Risk Factors", including but not limited to "Potential Profitability of Mineral Properties Depends Upon Other Factors Beyond the Control of Alexco" and "General Economic Conditions May Adversely Affect Alexco's Growth and Profitability" thereunder).

## 6. FINANCIAL RESULTS

Key financial metrics are summarized as follows:

<i>(expressed in thousands of Canadian dollars, except per share and share amounts)</i>	<b>Q4 2021</b>	<b>Q4 2020</b>	<b>FY 2021</b>	<b>FY 2020</b>
Revenues – Mining operations	2,814	-	19,007	-
Revenues – Reclamation management	453	633	2,495	2,866
Operating Loss	(10,646)	(11,605)	(19,421)	(22,333)
Adjusted Loss Before Taxes <sup>1</sup>	(10,771)	(11,676)	(15,301)	(22,359)
Cash and cash equivalents	9,933	23,742	9,933	23,742
Net Working Capital <sup>1</sup>	1,389	15,353	1,389	15,353
Adjusted Net Loss from Continuing Operations <sup>1</sup>	(6,976)	(9,547)	(12,605)	(16,842)
Net Loss from Continuing Operations <sup>2</sup>	(9,069)	(15,817)	(3,146)	(38,570)
<b>Shareholders</b>				
Basic and diluted net loss from Continuing Operations per common share <sup>2</sup>	(0.06)	(0.12)	(0.02)	(0.30)
Adjusted basic net loss from Continuing Operations per common share <sup>1</sup>	(0.05)	(0.07)	(0.09)	(0.13)
Adjusted diluted net loss from Continuing Operations per common share <sup>1</sup>	(0.04)	(0.07)	(0.08)	(0.13)
Total assets <sup>3</sup>	210,362	171,667	210,362	171,667
Total non-current liabilities	7,437	10,949	7,437	10,949

1. See "Non-GAAP Measures".

2. Net loss from Continuing Operations for Q4 2021 includes a non-cash fair value loss related to the embedded derivative asset totaling \$2,093,000 (2020 – \$6,270,000). Net loss from Continuing Operations for FY 2021 includes a non-cash fair value gain related to the embedded derivative asset totaling \$9,459,000 (2020 - loss of \$21,728,000).

3. Total assets increased primarily due to expenditures on mineral properties, plant and equipment.



**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
FOR THE YEAR ENDED DECEMBER 31, 2021

Selected financial information for the three most recent years ended is summarized as follows:

<i>(expressed in thousands of Canadian dollars, except per share and share amounts)</i>	<b>FY 2021</b>	<b>FY 2020</b>	<b>FY 2019</b>
Revenue	21,502	2,866	2,364
Gross Loss	(8,446)	(434)	(200)
Net Loss from Continuing Operations	(3,146)	(38,570)	(7,699)
Net Loss	(3,146)	(31,234)	(8,915)
Basic Loss per Share	(0.02)	(0.24)	(0.08)
Diluted Loss per Share	(0.02)	(0.24)	(0.08)
Gain (Loss) on Embedded Derivative Asset	9,459	(21,728)	5,489
Expenditures Capitalized to Mineral Properties	38,960	17,488	600
Total assets	210,362	171,667	145,353
Total non-current liabilities	7,437	10,949	11,967

The Corporation's financial results for the year ended December 31, 2021 were impacted by mining operations and the production and sale of concentrate, as well as capitalized expenditures to mineral properties as part of the Corporation's development activities at its Birmingham and Flame & Moth mines. Additionally, capitalized expenditures to exploration and evaluation assets related to the 2021 surface exploration program, and the fair value adjustment to the embedded derivative asset (due to an overall decline in silver prices during the year) also impacted 2021 financial results. The Corporation's financial results for the year ended December 31, 2020 were impacted by the February 2020 sale of AEG which was presented as a discontinued operation upon disposal as well as the associated income net of tax from discontinued operations, the August 2020 decision to move Keno Hill to production and its amendment to the Wheaton SPA, mine site maintenance expenditures incurred at the Bellekeno mine, and the fair value adjustment to the embedded derivative asset due to an overall increase in silver prices during the 2020 year, among other factors. The Corporation's financial results for the year ended December 31, 2019 were also impacted by the February 2020 sale of AEG whereby financial information for the year ended December 31, 2019 related to AEG was presented as a discontinued operation.

Selected financial information for the most recent eight quarters is summarized as follows, reported in thousands of Canadian dollars except for per share amounts:

<b>Period</b>	<b>Revenue</b>	<b>Gross Profit (Loss)</b>	<b>Net Income (Loss)</b>	<b>Basic Income (Loss) per Share</b>	<b>Diluted Income (Loss) per Share</b>	<b>Gain (Loss) on Embedded Derivative Asset</b>	<b>Expenditures Capitalized to Mineral Properties</b>
Q1 2020	567	27	12,053	\$ 0.10	\$ 0.10	8,097	1,975
Q2 2020	871	(24)	(12,229)	\$(0.10)	\$(0.10)	(11,579)	1,396
Q3 2020	795	(153)	(15,241)	\$(0.11)	\$(0.11)	(11,976)	4,817
Q4 2020	633	(284)	(15,817)	\$(0.12)	\$(0.12)	(6,270)	10,196
Q1 2021	3,813	(1,066)	4,159	\$ 0.03	\$ 0.03	3,009	9,537
Q2 2021	7,939	(467)	(2,748)	\$(0.02)	\$(0.02)	(200)	9,830
Q3 2021	6,483	(1,513)	4,511	\$ 0.03	\$ 0.03	8,743	8,795
Q4 2021	3,267	(5,400)	(9,069)	\$(0.06)	\$(0.06)	(2,093)	10,798

1. Sum of all the quarters may not add up to the yearly totals due to rounding.

Our financial results are primarily driven by concentrate production and Ag prices. Significant changes in any of these factors directly impact our revenue, gross profit (loss), and net income (loss). In addition, significant changes to model inputs for the embedded derivative asset (see "Embedded Derivative Asset and Financial Instruments") can significantly impact net income (loss) and gain (loss) on embedded derivative asset. Throughout the 2020 and 2021 periods, as a result of the Corporation's decision to re-start and advance Keno Hill to production, significant development activities have occurred affecting expenditures capitalized to mineral properties. During Q1 2020, the Corporation sold its former subsidiary business, Alexco Environmental Group (AEG) and 2020 results include results from continuing and discontinued operations.

*General and Administrative Expenses*



Corporate general and administrative expenses during Q4 2021 totaled \$4,758,000 compared to \$4,488,000 for Q4 2020. Both periods included non-cash costs in the amounts of \$2,387,000 and \$2,220,000 for Q4 2021 and Q4 2020, respectively, which relate to the annual share-based compensation grants to directors, officers and employees and amortization and depreciation expenses.

Corporate general and administrative expenses during FY 2021 totaled \$10,487,000 compared to \$9,615,000 for FY 2020. The increase in costs in FY 2021 primarily relates to increased salaries and administrative costs to support ramp up of production at site. Both periods included non-cash costs in the amounts of \$3,830,000 and \$3,603,000 for FY 2021 and FY 2020, respectively, which relate to share-based compensation, and amortization and depreciation expenses.

## **7. LIQUIDITY, CASH FLOWS AND CAPITAL RESOURCES**

### *Liquidity*

The Corporation's cash and cash equivalents as at December 31, 2021 totaled \$9,933,000 compared to \$23,742,000 as at December 31, 2020, while net working capital (see "Non-GAAP Measures") totaled \$1,389,000 compared to \$15,353,000 at December 31, 2020. The Corporation's restricted cash and deposits as at December 31, 2021 totaled \$2,990,000 compared to \$2,932,000 as at December 31, 2020.

The Corporation anticipates it will have sufficient capital resources to service the requirements of its capital and development costs for underground production operations, exploration activities, and corporate offices and administration, for at least the next 12 month period. As of the date of this MD&A, the Corporation is mining from three ore faces at the Flame & Moth mine and mining a longhole ore stope at the Bermingham mine. The Corporation anticipates drawing the US\$10,000,000 Facility under the Corporation's offtake agreement, of which US\$5,000,000 was received in March 2022. On January 27, 2022, the Corporation completed an equity financing and issued 2,129,685 flow-through shares with respect to "Canadian exploration expenses" priced at \$2.70 per CEE Share, and 1,480,740 flow-through shares with respect to "Canadian development expenses" priced at \$2.33 per CDE Share, for aggregate gross proceeds of \$9,200,274. The proceeds from the CEE Shares will be used to fund the Corporation's 2022 surface exploration drilling program and the proceeds from the CDE Shares will be used to fund underground development at the Flame & Moth mine and Bermingham mine. The Corporation believes the Facility, proceeds from the flow-through equity financing, and planned concentrate revenue offsets will be sufficient to ensure completion of scale up of the Bermingham and Flame & Moth mines and central milling facility to reach cash self-sufficiency.

As noted elsewhere in this MD&A, the longer term continuation or increased COVID-19 related workplace and travel restrictions, supply chain interruptions, equipment availability and recruitment/retention of underground miners and maintenance technicians remain a risk to ramp-up and production activities at Keno Hill. Further, any unforeseen capital and development expenditures in excess of current plans, slower than forecasted development advance rates, and funding necessary to achieve the Corporation's long-term objectives for the ongoing exploration and future development of its mineral properties may require the Corporation to raise additional funding in the future.

The Corporation's main sources of funding have been from mining operations revenue and reclamation management revenue from ERDC (and prior to February 14, 2020 from environmental services provided through AEG) and equity issuances. All sources of financing reasonably available will be considered to fund future capital requirements should they arise, including but not limited to issuance of new capital, issuance of new debt, and the sale of assets in whole or in part, including mineral property interests or other property interests. There can be no assurance of profitable mining operations or continued access to financing in the future, and an inability to generate or secure such funding may require the Corporation to substantially curtail and defer its planned exploration and development activities.

The Corporation's activities expose it to a variety of financial risks: market risk (currency risk), credit risk, commodity risk and liquidity risk. Risk management is carried out by Management under policies approved by the Board of Directors. Management identifies and evaluates the financial risks in co-operation with the Corporation's operating units. The Corporation's overall risk management program seeks to minimize potential adverse effects on the Corporation's financial performance, in the context of its general capital management objectives as further described in Note 21 of the Corporation's consolidated financial statements for the year ended December 31, 2021.

The Corporation manages liquidity uncertainty by monitoring actual and projected cash flows on a regular basis to ensure the Corporation can service its contractual obligations and commitments such as flow through financing



## MANAGEMENT'S DISCUSSION AND ANALYSIS

### FOR THE YEAR ENDED DECEMBER 31, 2021

commitments. Factors that can impact the Corporation's liquidity are monitored regularly and include operational levels, operating costs, capital costs and foreign exchange rates.

#### Cash Flows

(expressed in thousands of Canadian dollars)	For the three months ended		For the years ended	
	2021	December 31 2020	2021	December 31 2020
Cash used in operating activities	\$ (4,512)	\$ (8,245)	\$ (9,072)	\$ (15,703)
Cash used in investing activities	(6,901)	(7,137)	(42,854)	(5,368)
Cash from (used in) financing activities	(858)	(627)	38,117	37,635
	\$ (12,271)	\$ (16,009)	\$ (13,809)	\$ 16,564

Cash used in operating activities was \$4,512,000 for Q4 2021 versus \$8,245,000 for Q4 2020. The majority of cash used in operating activities during Q4 2021 was primarily related to operating expenditures from production at the Bellekeno and Bermingham mines, and general and administrative expenses, partially offset by the sale of concentrate from the production of concentrate inventories from the Bellekeno and Bermingham mines. The cash used in operating activities during Q4 2020 were expended on site-based maintenance costs, including costs to advance the Bellekeno deposit to production, non-capital mill refurbishments and general and administrative expenses. Cash used in investing activities was \$6,901,000 for Q4 2021 versus \$7,137,000 for Q4 2020. The cash used in investing activities during Q4 2021 and Q4 2020 was primarily related to expenditures on mineral properties, plant and equipment in the form of purchases of underground equipment and mill upgrades at Keno Hill. The cash used in financing activities was \$858,000 for Q4 2021 versus \$627,000 for Q4 2020. The cash used in financing activities in Q4 2021 and Q4 2020 was primarily related to the repayment of lease liabilities.

Cash used in operating activities was \$9,072,000 for FY 2021 versus \$15,703,000 for FY 2020. The majority of cash used in operating activities for both FY 2021 and FY 2020 was expended on site-based operating expenditures as the Corporation ramps up ore mining operations at Keno Hill, as well as general and administrative expenses. FY 2021 expenditures were partially offset by the sale of concentrate from the production of concentrate inventories from the Bellekeno and Bermingham mines. Cash used in investing activities was \$42,854,000 for FY 2021 versus \$5,368,000 for FY 2020. The increase in cash used in investing activities was primarily related to the positive decision to proceed to development and production at Keno Hill and the related increased development costs and purchases of underground equipment and mill upgrades at Keno Hill, partially offset by the proceeds from the sale of AEG in FY 2020. Cash from financing activities was \$38,117,000 for FY 2021 versus \$37,635,000 for FY 2020. The cash from financing activities was primarily related to two equity financings during FY 2021 with net proceeds of \$37,955,000 versus two equity financings with net proceeds of \$36,090,000 during FY 2020.

#### Capital Resources

On November 2, 2020 the Corporation filed a short-form base shelf prospectus (the "Shelf") with the securities commissions in each of the Provinces of British Columbia, Alberta, Saskatchewan, Manitoba and Ontario and a corresponding amendment to its registration statement on Form F-10 (Registration Statement) with the United States Securities and Exchange Commission (SEC) under the U.S./Canada Multijurisdictional Disclosure System, which allows the Corporation to make offerings of common shares, warrants, subscription receipts and/or units up to an aggregate total of \$50,000,000 during the 25-month period following November 2, 2020. As of the date of this MD&A, \$49,651,515 has been applied against this Shelf.

On January 27, 2022, subsequent to year-end, the Corporation completed an equity financing and issued 2,129,685 flow-through shares with respect to "Canadian exploration expenses" priced at \$2.70 per CEE Share, and 1,480,740 flow-through shares with respect to "Canadian development expenses" priced at \$2.33 per CDE Share, for aggregate gross proceeds of \$9,200,274. The proceeds from the CEE Shares will be used to fund the 2022 surface exploration drilling program and the proceeds from the CDE Shares will be used for underground development at the Flame & Moth and Bermingham mines in 2022.

On September 23, 2021, the Corporation and the Offtaker amended the existing offtake agreement to allow for an unsecured revolving Facility for up to US\$7,500,000. The Facility allows the Corporation to request prepayments, in US\$1,000,000 increments, which are repaid in five monthly instalments against future deliveries of concentrate or in



**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
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cash. The interest rate on drawn amounts is equal to three month LIBOR + 7.05%. The standby fee on undrawn amounts is 1.5% per annum, payable quarterly. On January 18, 2022, the Corporation and the Offtaker further amended the Facility, increasing the total prepayments allowed under the Facility from US\$7,500,000 to US\$10,000,000. All other terms of the Facility remain unchanged. In March 2022, the Corporation received a prepayment in the amount of US\$5,000,000 under the Facility.

On June 10, 2021, the Corporation completed an equity financing and issued 8,214,450 common shares at a price of \$3.50 per share for aggregate gross proceeds of \$28,750,575, for which such proceeds were used as follows:

<i>(expressed in thousands of Canadian dollars)</i>	<b>Estimated Amount to be Expended</b>	<b>Approximate Amount Expended <sup>(2)</sup></b>
Use of Proceeds:		
Underwriters' fee in respect of June 2021 Offering	\$ 1,337	\$ 1,337
Costs of the June 2021 Offering	250	350
Mining operations and development at Keno Hill Silver Project	7,000	24,645
General corporate and working capital purposes <sup>(1)</sup>	20,164	2,419
	<b>\$ 28,751</b>	<b>\$ 28,751</b>

1. Net proceeds of \$3,575,599 from the exercise in full of the underwriter's over-allotment option were added to general working capital.
2. Approximate amounts expended as of the date of this MD&A.

On January 28, 2021, the Corporation completed an equity financing and issued 2,053,670 flow-through shares with respect to "Canadian exploration expenses" priced at \$4.48 per CEE Share, and 651,100 flow-through shares with respect to "Canadian development expenses" priced at \$3.84 per CDE Share, for aggregate gross proceeds of \$11,700,666, for which such proceeds were used as follows:

<i>(expressed in thousands of Canadian dollars)</i>	<b>Estimated Amount to be Expended</b>	<b>Approximate Amount Expended<sup>(1)</sup></b>
Use of Proceeds:		
Underwriters' fee in respect of January 2021 Offering	\$ 697	\$ 697
Costs of the January 2021 Offering	199	199
CEE Shares – 2021 surface exploration drilling program	8,520	8,520
CDE Shares – Flame & Moth and Bermingham mine underground development	2,285	2,285
	<b>\$ 11,701</b>	<b>\$ 11,701</b>

1. Approximate amounts expended as of the date of this MD&A.

The Corporation holds a \$1,250,000 promissory note receivable that is payable to Alexco on December 31, 2022, bearing interest of 5%.

The following table summarizes the current contractual obligations of the Corporation and associated payment requirements over the next five years and thereafter:

<b>Contractual Obligations</b> <i>(expressed in thousands of Canadian dollars)</i>	<b>Payments Due by Period</b>				
	<b>Total</b>	<b>Less than 1 year</b>	<b>1 – 3 years</b>	<b>3 – 5 years</b>	<b>After 5 years</b>
Lease liabilities	\$ 5,972	\$ 3,351	\$ 2,621	\$ Nil	\$ Nil
Decommissioning and rehabilitation provision (undiscounted basis)	6,600	716	12	548	5,324
Committed Expenditures:					
Purchase obligations	438	175	198	65	Nil
<b>Total</b>	<b>\$ 13,010</b>	<b>\$ 4,242</b>	<b>\$ 2,831</b>	<b>\$ 613</b>	<b>\$ 5,324</b>





### *Share Data*

As at the date of this MD&A, the Corporation has 155,250,902 common shares issued and outstanding. In addition, there are outstanding incentive share options exercisable into a further 8,463,118 common shares, warrants to be settled by way of common shares issued from treasury for a further 2,000,000 common shares, restricted share units to be settled by way of common shares issued from treasury for a further 1,102,735 common shares and deferred share units to be settled by way of common shares issued from treasury for a further 894,000 common shares.

### *Off-Balance Sheet Arrangements*

Alexco has no off-balance sheet arrangements as defined by National Instrument 52-109.

## **8. EMBEDDED DERIVATIVE ASSET AND FINANCIAL INSTRUMENTS**

### *Embedded Derivative Asset*

The fair value of the embedded derivative asset related to the Wheaton SPA was estimated based on the discounted future cash flows using a probability-based dynamic valuation model resulting in a fair value adjustment during the years ended December 31, 2021, of \$9,459,000 (2020 – (\$21,728,000)), respectively. The model relies upon inputs from the current mine plan less payable ounces already delivered. The model is updated quarterly for the Corporation's credit spread, Wheaton's credit spread, risk-free yield curve, silver price forward curve, historical silver price volatility, mineral reserves and resources and the production profile. Management estimates mineral reserves and resources and production profile, based on information compiled and reviewed by management's experts. Payments from Wheaton are inversely related to the silver price; if, for example, silver prices were to increase or decrease from the current spot and forward prices as at December 31, 2021 by 10% per ounce and all other assumptions remained the same, the approximate derivative asset value would be \$18,843,000 and \$27,559,000, respectively.

The valuation model for the embedded derivative asset related to the Wheaton SPA relies upon inputs from the current mine plan incorporating the payable ounces already delivered. It is also revised for updated studies, mine plans and actual production. Furthermore, the valuation model for the embedded derivative asset is updated quarterly to utilize a probability-based dynamic valuation model as opposed to a static valuation model. As such, the discount rate used and Ag price assumptions being updated quarterly are based on the risk-free yield curve and Ag price forward curve at quarter end.

The following table summarizes the expected stand-alone impact on the embedded derivative asset value based on changes in model inputs:

Dynamic Model Input Change	Expected Impact on Embedded Derivative Asset Value
Ag Price Increase	Decrease
Ag Price Volatility Increase	Decrease
Foreign Exchange: US dollar appreciates compared to CDN dollar	Increase
Risk Free Yield Increase	Decrease

Management expects that changes in the fair value of the embedded derivative asset during production will largely be driven by the risk-free yield curve, Ag price forward curve and production rate. In volatile Ag price environments, the valuation changes to the embedded derivative asset are expected to be material.

### *Financial Instruments*

The Corporation's financial instruments include its cash and cash equivalents, its restricted cash, its accounts and other receivables, its accounts payable and accrued liabilities, its promissory note receivable, and its investment in marketable securities.



Substantially all the Corporation's cash, demand deposits and term deposits are held with major financial institutions in Canada. With respect to these instruments, management believes the exposure to credit risk is insignificant due to the nature of the institutions with which they are held, and that the exposure to liquidity and interest rate risk is similarly insignificant given the low-risk-premium yields and the demand or short-maturity-period character of the deposits.

As at December 31, 2021, a total of \$2,990,000 of the Corporation's restricted cash and deposits represents cash collateral posted with a surety company to underwrite surety bonds for security in respect of mine-site reclamation at certain of the Corporation's mineral properties. The balance of the Corporation's restricted cash and deposits represent security provided in respect of certain long-term operating lease commitments. The term deposits held as at December 31, 2021 as individual financial instruments carry initial maturity periods of one year or less. They have been classified as investments and accordingly are carried at amortized cost. All term deposits held are investment grade, low risk investments, generally yielding between 0.05% and 0.3% per annum, and their carrying amounts approximate their fair values given their short terms and low yields.

The Corporation's accounts and other receivables as at December 31, 2021 total \$3,073,000, and primarily relate to a receivable from a government agency and provisionally priced trade receivables from the Corporation's Offtaker. The Corporation is exposed to credit losses due to the non-performance of its counterparties. The Corporation's customer for the current reclamation management operations (carried out by ERDC) is a government body and therefore is not considered a material risk. Provisionally priced trade receivables consist of amounts receivable under the Corporation's offtake agreement. Changes in the fair value of these receivables are recorded as other revenue within mining operations revenue at each period end using quoted forward metals prices obtained from futures exchanges. Provisionally priced trade receivables were recorded at fair value as at December 31, 2021.

The Corporation's promissory note receivable as at December 31, 2021 totals \$1,250,000 and relates to the sale of its former subsidiary business, Alexco Environmental Group (AEG). The Corporation is exposed to credit losses due to the potential non-performance of this counterparty. The maturity date of the promissory note receivable is December 31, 2022, bearing interest of 5% for the duration of this period and payable on maturity. The Corporation considered the expected lifetime credit losses to be nominal as at December 31, 2021.

The carrying amounts of the Corporation's trade and other accounts receivable and accounts payable and accrued liabilities are estimated to reasonably approximate their fair values, while the carrying amount of investments in marketable securities, provisionally priced trade receivables, and the embedded derivative asset are adjusted to fair value at each balance sheet date. The fair values of all of the Corporation's financial instruments measured as at December 31, 2021, other than the marketable securities that are included in investments, constitute Level 2 and Level 3 measurements within the fair value hierarchy defined under IFRS. The fair value of the investments in marketable securities constitute Level 1 measurements.

All of the Corporation's mineral properties, plant and equipment are located in Canada and all of its mining operations occur in Canada. With development recommencing at the Keno Hill Silver District, the Corporation's exposure to US dollar currency risk increases as some accounts payable and accrued liabilities are denominated in US dollars. The Corporation has not employed any hedging activities in respect of the prices for its payable metals or for its exposure to fluctuations in the value of the US dollar.

## **9. KEY MANAGEMENT COMPENSATION**

The remuneration of directors and those persons having authority and responsibility for planning, directing, and controlling activities of the Corporation is as follows:

(expressed in thousands of Canadian dollars)	For the years ended December 31	
	2021	2020
Salaries and other short-term benefits	\$ 2,021	\$ 1,942
Share-based compensation	2,879	1,979
	\$ 4,900	\$ 3,921

## **10. CRITICAL ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS**

The Corporation adopted a new accounting policy related to *Revenue recognition* and early adopted a new accounting standard *IAS 16, Property, Plant and Equipment: Proceeds before Intended Use*, which are described in Notes 3 and





4 of Alexco's December 31, 2021 annual consolidated financial statements. All other significant accounting policies as well as significant judgments and estimates are consistent with those presented in Notes 3 and 5 of Alexco's December 31, 2021 annual consolidated financial statements.

## 11. NON-GAAP MEASURES

The Corporation presents non-GAAP measures, which are not defined in IFRS. A description and calculation of the measures are given below and may differ from similarly named measures provided by other issuers. We disclose these measures because we believe it assists readers in understanding Alexco's financial position. These measures should not be considered in isolation or used in substitute for other measures prepared in accordance with IFRS.

*Adjusted Loss Before Taxes, Adjusted Net Loss from Continuing Operations and Adjusted basic and diluted net loss from Continuing Operations per common share*

The Adjusted Loss Before Taxes excludes amounts recorded with respect to the change in fair value on the embedded derivative asset related to the Wheaton SPA, and within this MD&A is provided before tax, net of tax and on a per-share basis (see Adjusted Net Loss from Continuing Operations and Adjusted basic and diluted net loss from Continuing Operations per common share). These measures are used by management to facilitate comparability between periods, and are believed to be relevant to external users for the same reason. They are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

These measures are reconciled to Loss Before Taxes from the consolidated statements of loss and comprehensive loss for FY 2021 and FY 2020. Adjusted basic and diluted net loss from Continuing Operations per common share has been calculated using the same weighted average number of common shares outstanding included in the consolidated statements of loss and comprehensive loss for FY 2021 and FY 2020. The reconciliation for Q4 2021, Q4 2020, FY 2021, and FY 2020 is as follows:

<i>(expressed in thousands of Canadian dollars, except per share amounts)</i>	<b>Q4 2021</b>	<b>Q4 2020</b>	<b>FY 2021</b>	<b>FY 2020</b>
Loss Before Taxes	\$ (12,864)	\$ (17,946)	\$ (5,842)	\$ (44,087)
Subtract:				
Gain (loss) on embedded derivative asset	(2,093)	(6,270)	9,459	(21,728)
Adjusted Loss Before Taxes	(10,771)	(11,676)	(15,301)	(22,359)
Income Tax Recovery	3,795	2,129	2,696	5,517
Adjusted Net Loss from Continuing Operations	\$ (6,976)	\$ (9,547)	\$ (12,605)	\$ (16,842)
Adjusted basic net loss from Continuing Operations per common share	\$ (0.05)	\$ (0.07)	\$ (0.09)	\$ (0.13)
Adjusted diluted net loss from Continuing Operations per common share	\$ (0.04)	\$ (0.07)	\$ (0.08)	\$ (0.13)

### *Net Working Capital*

Consolidated net working capital comprises those components of current assets and liabilities which support and result from the Corporation's ongoing running of its current operations. It is provided to give a quantifiable indication of the Corporation's short-term cash generation ability and business efficiency. As a measure linked to current operations and sustainability of the business, net working capital includes: cash and cash equivalents, accounts and other receivables, inventories, prepaid expenses and other, and promissory note receivable, less accounts payable and accrued liabilities, and lease liabilities. Excluded components are current portion of embedded derivative asset and other current liabilities.

## 12. DISCLOSURE CONTROLS AND PROCEDURES

The management of Alexco is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Chief Executive Officer and the Chief Financial Officer and effected by the Board of Directors, management and other



personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the accounting principles under which the Alexco's financial statements are prepared. It includes those policies and procedures that:

- (i) pertain to the maintenance of records that accurately and fairly reflect, in reasonable detail, the transactions related to and dispositions of Alexco's assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards, and that Alexco receipts and expenditures are made only in accordance with authorizations of management and Alexco's directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Alexco assets that could have a material effect on Alexco's financial statements.

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

Management assessed the effectiveness of Alexco's internal control over financial reporting as at December 31, 2020, based on the criteria set forth in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has concluded that Alexco's internal control over financial reporting was effective as at December 31, 2021.

The effectiveness of Alexco's internal control over financial reporting as at December 31, 2021 has been audited by PricewaterhouseCoopers LLP, Alexco's independent registered public accounting firm.

There has been no change in Alexco's internal control over financial reporting during Alexco's fiscal year ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, Alexco's internal control over financial reporting.

### **13. RISK FACTORS**

Risk factors identified by the Corporation, as well as risks not currently known to the Corporation or that the Corporation currently deems to be immaterial, could materially affect the Corporation's future business, financial condition, results of operations, earnings and prospects, and could cause events to differ materially from those described in forward-looking statements relating to the Corporation. Readers are encouraged to review other specific risk factors which are discussed elsewhere in this MD&A, as well as in the Corporation's consolidated financial statements (under the headings "Description of Business and Nature of Operations", "Significant Accounting Policies" and "Financial Instruments" and elsewhere within that document) and the list of risk factors identified by the Corporation in the Corporation's Annual Information Form for the year ended December 31, 2021.

### **14. CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS**

This MD&A contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and "forward-looking information" within the meaning of applicable Canadian securities laws (together, "forward-looking statements") concerning the Corporation's business plans, including but not limited to anticipated results and developments in the Corporation's operations in future periods, planned exploration and development of its mineral properties, plans related to its business and other matters that may occur in the future, made as of the date of this MD&A.

Forward-looking statements may include, but are not limited to, statements with respect to additional capital requirements to fund further exploration and development work on the Corporation's properties, future remediation and reclamation activities, future mineral exploration, the estimation of Mineral Reserves and Mineral Resources, the realization of Mineral Reserve and Mineral Resource estimates, future mine construction and development activities, future mine operation and production, the timing of activities, the amount of estimated revenues and expenses, the success of exploration activities, permitting timelines, requirements for additional capital and sources, uses of funds, and the Corporation's ability to successfully withstand the impact of the COVID-19 pandemic. Any statements that



express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as "expects", "anticipates", "plans", "estimates", "intends", "strategy", "goals", "objectives" or stating that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved, or the negative of any of these terms and similar expressions) are not statements of historical fact and may be "forward-looking statements".

Forward-looking statements are subject to a variety of known and unknown risks, uncertainties and other factors which could cause actual events or results to differ from those expressed or implied by the forward-looking statements. Such factors include, but are not limited to, risks related to actual results and timing of exploration and development activities; actual results and timing of exploration, development and mining activities; inability of the Corporation to finance the development of its mineral properties; uncertainty of capital costs, operating costs, production and economic returns; actual results and timing of environmental services operations; actual results and timing of remediation and reclamation activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of silver, gold, lead, zinc and other commodities; uncertainties relating to the interpretation of drill results, the geology, grade and continuity of the Corporation's mineral deposits; possible variations in resources, grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; the Corporation's need to attract and retain qualified management and technical personnel; accidents, labour disputes and other risks of the mining industry; First Nation rights and title; continued capitalization and commercial viability; global economic conditions; competition; risks related to governmental regulation, including environmental regulation; delays or inability of the Corporation in obtaining governmental approvals necessary to develop and operate mines on the Corporation's properties; inability of the Corporation to obtain additional financing needed to fund certain contingent payment obligations on reasonable terms or at all; variations in interest rates and foreign exchange rates; and the impact of COVID-19 and the instability thereof, including disruption or delay of exploration and mining activities. Furthermore, forward-looking statements are statements about the future and are inherently uncertain, and actual achievements of the Corporation or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including but not limited to those referred to in this MD&A under the heading "Risk Factors" and elsewhere.

Forward-looking statements relate to analyses and other information that are based on forecasts of future results, estimates of amounts not yet determinable and certain assumptions that management believes are reasonable at the time they are made. In making the forward-looking statements included in this MD&A, the Corporation has applied several material assumptions, including, but not limited to, the assumption that: (1) additional financing may be needed to fund certain contingent payment obligations to Wheaton; (2) additional financing needed for the capacity related refund under the SPA with Wheaton will be available on reasonable terms; (3) additional financing needed for further exploration and development work on the Corporation's properties will be available on reasonable terms; (4) the proposed development of its mineral projects will be viable operationally and economically and proceed as planned; (5) market fundamentals will result in sustained silver, gold, lead and zinc demand and prices, and such prices will not be materially lower than those estimated by management in preparing the consolidated financial statements for the year ended December 31, 2021; (6) market fundamentals will result in sustained silver, gold, lead and zinc demand and prices, and such prices will be materially consistent with or more favourable than those anticipated in the PFS; (7) the actual nature, size and grade of its Mineral Reserves and Mineral Resources are materially consistent with the Mineral Reserve and Mineral Resource estimates reported in the supporting technical reports, including the PFS; (8) labour and other industry services will be available to the Corporation at prices consistent with internal estimates; (9) the continuances of existing and, in certain circumstances, proposed tax and royalty regimes; and (10) that other parties will continue to meet and satisfy their contractual obligations to the Corporation. Statements concerning Mineral Reserve and Mineral Resource estimates may also be deemed to constitute forward-looking information to the extent that they involve estimates of the mineralization that will be encountered as the Keno Hill project is developed. Other material factors and assumptions are discussed throughout this MD&A and, in particular, under the headings "*Critical Accounting Estimates and Judgments*" and "*Risk Factors*".

The Corporation's forward-looking statements are based on the beliefs, expectations and opinions of management on the date the statements are made and should not be relied on as representing the Corporation's views on any subsequent date. While the Corporation anticipates that subsequent events may cause its views to change, the Corporation specifically disclaims any intention or any obligation to update forward-looking statements if circumstances or management's beliefs, expectations or opinions should change, except as required by applicable law. For the reasons set forth above, investors should not place undue reliance on forward-looking statements.



## 15. SUMMARY OF MINERAL RESERVE AND RESOURCE ESTIMATES

The following tables sets forth the estimated Probable Mineral Reserves and Mineral Resources for the Corporation's mineral properties within the KHSD as outlined in the Technical Report filed under NI 43-101 on SEDAR on May 26, 2021, and further described in the press release dated May 26, 2021 entitled, "Alexco Announces 22% Increase to Silver Reserves; Updated Technical Report Demonstrates Robust Economics at Keno Hill", and as further described in the press release dated January 18, 2022 entitled, "Alexco Reports 43% Expansion of Bermingham Indicated Resource to 47 Million Ounces of Silver at 939 Grams per Tonne; Remains Open":

### Summary of Mineral Reserves Estimates

Deposit <sup>2,3</sup>	Category	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au (g/t)	Contained Metal			
							Ag (000 oz)	Au (000 oz)	Pb (M lbs)	Zn (M lbs)
Bellekeno <sup>1</sup>	Proven	-	-	-	-	-				
	Probable	12,809	936	13.00	7.30	0	385	0	4	2
Bellekeno Surface Stockpile <sup>1</sup>	Proven									
	Probable	3,397	1150	21.70	4.50	0	126	0	2	0
Lucky Queen	Proven	-	-	-	-	-	-		-	-
	Probable	70,648	1,269	2.71	1.56	0.13	2,883	0	4	2
Flame and Moth	Proven	-	-	-	-	-	-		-	-
	Probable	721,322	672	2.69	6.21	0.49	15,590	11	43	99
Bermingham	Proven	-	-	-	-	-	-		-	-
	Probable	630,173	899	2.26	1.30	0.13	18,209	3	31	18
<b>Total</b>	<b>Proven</b>	-	-	-	-	-	-		-	-
	<b>Probable</b>	<b>1,438,349</b>	<b>804</b>	<b>2.64</b>	<b>3.84</b>	<b>0.31</b>	<b>37,193</b>	<b>14</b>	<b>84</b>	<b>122</b>

**Notes:**

1. Mineral Reserves reported herein are dated May 26, 2021 and do not include depletion since that time.
2. The Mineral Reserves are based on an NSR cutoff value using estimated metallurgical recoveries, assumed metal prices and smelter terms, which include payable factors, treatment charges, penalties, and refining charges
3. Tonnage and grade measurements are in metric units. Contained gold and silver ounces are reported as troy ounces
4. The Bellekeno, Lucky Queen, Flame & Moth and Bermingham deposits are incorporated into the current mine plan supported by disclosure in the news release dated May 26, 2021 entitled "Alexco Announces 22% Increase to Silver Reserves; Updated Technical Report Demonstrates Robust Economics at Keno Hill".
5. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.



**Summary of Indicated and Inferred Resource Estimates**

Category	Deposit	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Contained Ag(oz)
Indicated	Bellekeno	213,000	620	n/a	5.5%	5.5%	4,246,000
	Lucky Queen	132,300	1,167	0.2	2.4%	1.6%	4,964,000
	Flame & Moth	1,679,000	498	0.4	1.9%	5.3%	26,883,000
	Onek	700,200	191	0.6	1.2%	11.9%	4,300,000
	Birmingham	1,562,700	939	0.2	2.6%	1.7%	47,210,000
<b>Total Indicated</b>		<b>4,287,200</b>	<b>635</b>	<b>0.3</b>	<b>2.2%</b>	<b>5.0%</b>	<b>87,603,000</b>
Inferred	Bellekeno	302,000	359	n/a	2.5%	5.4%	3,486,000
	Lucky Queen	257,900	473	0.1	1.0%	0.8%	3,922,000
	Flame & Moth	365,200	356	0.3	0.5%	4.3%	4,180,000
	Onek	285,100	118	0.4	1.2%	8.3%	1,082,000
	Birmingham	843,400	735	0.2	2.0%	1.3%	19,930,000
<b>Total Inferred</b>		<b>2,053,600</b>	<b>494</b>	<b>0.2</b>	<b>1.6%</b>	<b>3.3%</b>	<b>32,600,000</b>
<b>Notes:</b> <ol style="list-style-type: none"> <li>All Mineral Resources are classified following the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) of NI 43-101.</li> <li>Indicated Mineral Resources are inclusive of Probable Mineral Reserves estimates.</li> <li>Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. All numbers have been rounded to reflect the relative accuracy of the estimates.</li> <li>The Mineral Resource estimates comprising Lucky Queen and Flame &amp; Moth, and Onek are supported by disclosure in the news release dated May 26, 2021 entitled "Alexco Announces 22% Increase to Silver Reserves; Updated Technical Report Demonstrates Robust Economics at Keno Hill".</li> <li>The Mineral Resource estimate for the Birmingham deposit is supported by disclosure in the news release dated January 18, 2022 entitled "Alexco Reports 43% Expansion of Birmingham Indicated Resource to 47 Million Ounces of Silver at 939 Grams per Tonne; Remains Open" and the Mineral Resource estimate has an effective date of November 30, 2021.</li> <li>The Mineral Resource estimate for the Lucky Queen, Flame &amp; Moth and Onek deposits have an effective date of January 3, 2017.</li> <li>The Mineral Resource estimate for the Bellekeno deposit is based on an internal Mineral Resource estimate completed by Alexco Resource Corp. and externally audited by SRK Consulting Inc., having an effective date of January 01, 2021. This Mineral Resource estimate has been depleted to reflect all mine production from Bellekeno to the end of December 2020.</li> </ol>							

**Summary of Historical Resource Estimates**

		Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Contained Ag (oz)
<b>Historical Resources</b>	Silver King <sup>1,2</sup>						
	Proven, probable and indicated	<b>99,000</b>	<b>1,354</b>	<b>n/a</b>	<b>1.6%</b>	<b>0.1%</b>	<b>4,310,000</b>
	Inferred	<b>22,500</b>	<b>1,456</b>	<b>n/a</b>	<b>0.1%</b>	<b>n/a</b>	<b>1,057,000</b>
<b>Notes:</b> <ol style="list-style-type: none"> <li>Historical resources for Silver King were estimated by UKHM, as documented in an internal report entitled "Mineral Resources and Mineable Ore Reserves" dated March 9, 1997. The historical resources were estimated based on a combination of surface and underground drill holes and chip samples taken on the vein and calculated using the polygonal (block) model and the 1997 CIM definitions for resource categories. Verification of the estimate would require new drill holes into a statistically significant number of the historical resource blocks and/or a combination of on-vein sampling. A Qualified Person (as defined by NI 43-101) has not done sufficient work to classify this estimate of historical resources as current Mineral Resources or Mineral Reserves, nor is Alexco treating this historical estimate as current Mineral Resources or Mineral Reserves.</li> <li>The disclosure regarding the summary of historical Mineral Resources for Alexco's mineral properties within the Keno Hill District has been reviewed and approved by Neil Chambers, P.Eng., Mine Superintendent and a Qualified Person as defined by NI 43-101.</li> </ol>							



## **16. TECHNICAL DISCLOSURE CAUTIONARY NOTE TO U.S. INVESTORS – INFORMATION CONCERNING PREPARATION OF RESOURCE ESTIMATES**

The material scientific and technical information in respect of Alexco's Keno Hill Silver District project in the MD&A, unless otherwise indicated, is based upon the information contained in the PFS. Readers are encouraged to read the PFS, which is available under the Corporation's profile on SEDAR, for detailed information concerning KHSD. All disclosure contained in this MD&A regarding the Mineral Reserves and Mineral Resource estimates and economic analysis on the property is fully qualified by the full disclosure contained in the PFS.

A production decision which is made without a feasibility study of Mineral Reserves demonstrating economic and technical viability carries additional potential risks which include, but are not limited to, the risk that additional detailed work may be necessary with respect to mine design and mining schedules, metallurgical flow sheets and process plant designs, and the noted inherent risks pertaining to the inclusion of approximately 2% Inferred Mineral Resources (as defined herein) in the mine plan.

This MD&A has been prepared in accordance with the requirements of Canadian provincial securities laws, which differ from the requirements of U.S. securities laws. As a result, the Corporation reports the mineral reserves and resources of the projects it has an interest in according to Canadian standards. Canadian reporting requirements for disclosure of mineral properties are governed by National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"). NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These standards differ from the requirements of the SEC that are applicable to domestic United States reporting companies under subpart 1300 of Regulation S-K ("S-K 1300") under the Exchange Act. As an issuer that prepares and files its reports with the SEC pursuant to the multi-jurisdictional disclosure system of the Exchange Act, the Corporation is not subject to the requirements of S-K 1300. Any mineral reserves and mineral resources reported by the Corporation in accordance with NI 43-101 may not qualify as such under or differ from those prepared in accordance with S-K 1300. Accordingly, information included or incorporated by reference in this MD&A concerning descriptions of mineralization and estimates of mineral reserves and resources under Canadian standards may not be comparable to similar information made public by United States companies subject to the reporting and disclosure requirements of S-K 1300.

### **Additional Information**

Additional information relating to Alexco, including Alexco's Annual Information Form for the year ended December 31, 2021 can be found on the Corporation's profile on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Corporation's website at [www.alexcoresource.com](http://www.alexcoresource.com) and the Edgar website at [www.sec.gov](http://www.sec.gov).

