



**ALEXCO**

**ALEXCO RESOURCE CORP.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

This Management's Discussion and Analysis ("MD&A") of Alexco Resource Corp. ("Alexco" or the "Corporation") is dated March 11, 2020 and provides an analysis of Alexco's consolidated financial results for the year ended December 31, 2019 compared to the year ended December 31, 2018.

The following information should be read in conjunction with the Corporation's December 31, 2019 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, Vice President, Exploration, while that regarding mine development and operations has been reviewed and approved by Neil Chambers, P.Eng., Mine Superintendent, 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.

## **2019 HIGHLIGHTS AND OVERALL PERFORMANCE**

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### **CORPORATE**

- Overall, Alexco reported a net loss of \$8,915,000, or \$(0.08) per share for the year ended December 31, 2019 including non-cash cost adjustments of \$2,263,000. In 2018 the Corporation incurred a loss of \$8,501,000, including non-cash cost adjustments of \$2,597,000. The operating loss for both years were similar with offsetting differences to the net loss related to non-cash adjustments resulting from the treatment of the embedded derivative on the Wheaton Precious Metals ("Wheaton") streaming agreement, share-based compensation expense, deferred income tax expense and a reduction in Alexco Environmental Group ("AEG") profitability in 2019.
- The Corporation's cash and cash equivalents at December 31, 2019 totaled \$6,841,000 compared to \$8,576,000 at December 31, 2018, while net working capital (*see Non-GAAP Measures on page 21*) totaled \$10,090,000 compared to \$10,188,000 at December 31, 2018. The Corporation's restricted cash and deposits at December 31, 2019 totaled \$2,777,000 compared to \$2,725,000 at December 31, 2018.
- On June 7, 2019, the Corporation completed a bought deal public offering and issued 6,500,000 common shares at a price of US\$1.00 (\$1.33) per share for aggregate gross proceeds of US\$6,500,000 (\$8,634,000) for net cash proceeds of US\$5,775,000 (\$7,669,000).
- On April 23, 2019 the Corporation completed a private placement, on a bought deal basis, of 1,842,200 flow-through common shares at a price of \$1.90 per share for gross proceeds of \$3,500,000. The flow-through common shares comprise: (i) 1,579,000 flow-through shares with respect to "Canadian exploration expenses" (the "CEE Shares") priced at \$1.90 per CEE Share; and (ii) 263,200 flow-through shares with respect to "Canadian development expenses" (the "CDE Shares") priced at \$1.90 per CDE Share.

## MINE OPERATIONS AND EXPLORATION

- The Corporation announced the results of an independent pre-feasibility study on its 100% owned Keno Hill Silver project (see press release dated March 28, 2019 entitled “Alexco Announces Positive Pre-Feasibility Study for Expanded Silver Production at Keno Hill Silver District”) and on May 8, 2019, and as amended February 13, 2020, the Corporation released an independent technical report, effective as of March 28, 2019, entitled “NI 43-101 Technical Report Prefeasibility Study of the Keno Hill Silver District Project Yukon Territory, Canada” (the “PFS”). The results are discussed in detail under 2019 Developments on page 7 of this MD&A.
- During the year ended December 31, 2019, Alexco completed an 8,333 meter (“m”) surface exploration diamond drilling program focused on potential resource expansion and deeper targets in the vicinity of the Bermingham deposit, as well as following up on reconnaissance drilling from the 2018 program. The results are discussed in detail under 2020 Outlook - Exploration on page 9 of the MD&A.
- The Corporation completed the planned surface capital construction activities at the Bermingham deposit consistent with work outlined in the PFS, including installation of the underground production-related portal, construction of a lined treatment pond, initial construction of a coarse ore storage pad and upgrading of existing haul roads.
- As at December 31, 2019, Alexco had the requisite permits and authorizations for development and future ore production from the Bellekeno, Flame & Moth, Lucky Queen, and Onek deposits. Amendment of the Corporation’s Quartz Mining Licence (“QML”) was completed in the fourth quarter of 2019, which incorporates the Bermingham deposit into the mine plan. Alexco is in the final steps of amending and renewing the primary Water Use Licence (“WUL”) for mine-related activity in the District. A public hearing was held in mid-February 2020 and the Company expects the granting of the WUL renewal late in the first quarter of 2020. Once renewed, the WUL will authorize the use of water and deposition of waste from mining and milling operations at the Bermingham, Flame & Moth, Bellekeno and Lucky Queen (and Onek) deposits for a period of 15 years.
- The Keno Hill Silver District (“KHSD” or the “District”) 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 (“CCBA”) 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, District closure activities and mine production.

## ALEXCO ENVIRONMENTAL GROUP (“AEG”)

- AEG recognized revenues of \$29,206,000 for the year ended December 31, 2019 for a gross profit of \$6,076,000 achieving a gross margin of 21%, compared to revenues of \$19,880,000 for 2018 for a gross profit of \$6,052,000 achieving a gross margin of 30%. AEG recognized an operating loss before taxes for the year ended December 31, 2019 of \$1,405,000 (see Note 28 in the financial statements for the year ended December 31, 2019). The gross profit margin percentage declined in 2019 primarily due to scale-up of the overall business as well the use of third party contractors to complete construction of a larger water treatment system complex in Ontario and as two new longer-term projects coming online, which incurred higher than normal up-front costs.
- During the year AEG entered into an agreement with the Bank of Montreal (“BMO”) for a revolving line of credit (“LOC”) for up to \$4,000,000. The LOC has an interest rate of approximately 5.7% on drawn funds, is secured against AEG assets, and has customary covenants in place that are tested

quarterly. AEG utilized the LOC capacity to post a \$1,000,000 letter of credit for Mount Nansen. As of December 31, 2019, no amounts were drawn on the LOC.

- On February 14, 2020 the Corporation entered into a share purchase agreement (the “Share Purchase Agreement”) for the sale of AEG, to AEG’s executive management (“AEG Management”) led by AEG’s President (a related party due to the AEG President being a key member of management of Alexco). Under the terms of the Share Purchase Agreement, AEG Management purchased all of the shares of AEG in consideration for payment to Alexco of \$13,350,000. On closing of the transaction, AEG Management paid \$12,100,000 in cash, with the balance of \$1,250,000 payable pursuant to a promissory note that matures on February 14, 2021. Alexco retained ownership of Elsa Reclamation & Development Company (“ERDC”) and will execute the clean-up of historical mines in the District (as defined herein) under its existing contractual arrangement with the Federal Government of Canada.

The impact expected on Alexco’s operations subsequent to the sale of AEG will be the elimination of all AEG-related environmental consulting revenue and associated costs, offset by a continuation of the revenues and costs related to ERDC and the clean-up of the historical mines at Keno Hill. The number of employees of the consolidated company will decline by approximately 90 and there will be a material reduction in overhead costs associated with operating AEG.

The AEG assets and liabilities as of December 31, 2019, which form part of the Share Purchase Agreement are as follows:

<b>Assets</b>	
Cash and restricted cash	\$ 348,000
Accounts receivable and accrued receivables	6,021,000
Deposits and other assets	747,000
Property and equipment	1,652,000
Goodwill	550,000
<b>Total assets</b>	<b>\$ 9,318,000</b>
<b>Liabilities</b>	
Accounts payable and other liabilities	\$ 2,069,000
Unearned revenue	829,000
<b>Total liabilities</b>	<b>\$ 2,898,000</b>

The AEG revenues and expenses for the year ended December 31, 2019, which form part of the Share Purchase Agreement are as follows:

<b>Revenue</b>	
Environmental Services Revenue	\$ 26,824,000
<b>Cost of Sales</b>	
Environmental Services Cost	20,605,000
<b>Total Gross Profit</b>	<b>\$ 6,219,000</b>
<b>Expenses</b>	
General and administrative expenses	\$ 7,481,000
<b>Net loss</b>	<b>\$ 1,262,000</b>

*Note: see segmented Note 28 in the financial statements for the year ended December 31, 2019. ERDC impact in above numbers has been removed as it is excluded from the Share Purchase Agreement.*

## SELECTED ANNUAL CONSOLIDATED INFORMATION

(expressed in thousands of Canadian dollars, except per share amounts)	As at and for the year ended December 31		
	2019	2018	2017
Revenue <sup>1</sup>	29,206	19,880	10,732
Gross profit <sup>2</sup>	6,076	6,052	4,000
Net loss	(8,915)	(8,501)	(7,813)
Loss per share:			
Basic	(\$0.08)	(\$0.08)	(\$0.08)
Diluted	(\$0.08)	(\$0.08)	(\$0.08)
Total assets <sup>3</sup>	145,353	133,018	122,324
Total long-term liabilities <sup>4</sup>	11,967	8,384	5,669

### Notes:

1. The revenues increased significantly each year as a result of AEG expanding its business with the acquisition of Contango Strategies Ltd. and starting on larger long-term contracts.
2. The gross profits increased year over year as result of the increased revenues however, the gross profit percentage reduced year over year as a result of AEG starting longer-term projects that required higher up-front costs as well as increased use of third party contractors that result in lower margins to the business, as well as general expansion of the AEG business and related back office and support functions.
3. The total assets increased primarily as a result of additions to mineral properties each year and the recognition and revaluation of the embedded derivative.
4. The total long-term liabilities increased primarily due to recognition of lease liabilities in 2019, an increase in the decommissioning and restoration provision and deferred income tax liability during the year ended December 31, 2019.

## OVERVIEW OF THE BUSINESS

Alexco owns substantially all of the historic KHSD, located in Canada's Yukon Territory. The Bellekeno silver mine, one of the world's highest-grade silver mines with a production grade averaging 779 grams per tonne ("g/t") silver ("Ag"), 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 of silver during the 2010 – 2013 period. In September 2013 Alexco suspended Bellekeno mining operations in light of a sharply reduced silver and base metal prices. Since the suspension Alexco has focused on advancing the Flame & Moth and the Bermingham deposits, renegotiating third party contracts and reviewing other opportunities to reduce future mining operating costs for future operations at Keno Hill. This work culminated with the announcement of the PFS results in March 2019 and the publication of the PFS in May 2019, as amended in February 2020. With the PFS completed, Alexco is moving toward resumption of silver production at Keno Hill, including production from the Bellekeno, Flame & Moth, Bermingham and Lucky Queen silver deposits, subject to a positive production decision.

As of December 31, 2019 and up to February 14, 2020, Alexco also owned and operated an environmental consulting business, AEG, an environmental services business, providing consulting, remediation solutions and project management services in respect of environmental permitting and compliance and site remediation, primarily in Canada and the United States. AEG provided these services to both government and industry clients through its wholly owned subsidiaries, Alexco Environmental Group Holding Inc. ("AEG Holdings") which wholly owns Alexco Environmental Group Inc. ("AEG Canada"), Alexco Water and Environment Inc. ("AWE") and Contango Strategies Ltd. ("Contango"). Alexco also owned certain patent rights related to mine reclamation and closure processes including the in-situ immobilization of metals in groundwater, soils, waste stacks and pit lakes. On February 14, 2020 the Corporation sold AEG to AEG Management.

Alexco is a public company which is listed on the NYSE American Stock Exchange and the Toronto Stock Exchange (under the symbol AXU). Prior to August 12, 2019, the trading symbol on the Toronto Stock Exchange was AXR.

## **OUTLOOK AND STRATEGY**

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### ***Keno Hill Silver District***

Alexco's current focus is to re-start mining operations at Keno Hill. Alexco has the requisite permits and authorizations for future ore production from the Flame & Moth, Bermingham, Lucky Queen, Bellekeno and Onek deposits. Amendment of the Corporation's QML was completed in the fourth quarter of 2019, which incorporates the Bermingham deposit into the mine plan. Alexco is in the final steps of renewing the WUL having completed the public hearing in mid-February 2020 and expects the granting of the WUL renewal late in the first quarter of 2020. Once renewed the WUL will authorize the use of water and deposition of waste from mining and milling operations at the Bermingham, Flame & Moth, Bellekeno and Lucky Queen (and Onek) deposits for a period of 15 years.

### ***ERDC***

As part of Alexco's 2006 acquisition of the United Keno Hill Mines ("UKHM") mineral rights in the District, ERDC, a wholly owned subsidiary of Alexco, is party to the amended and restated subsidiary agreement ("ARSA") with the Federal Government of Canada ("Government of Canada"). Under the ARSA, ERDC is retained by the Government of Canada as a paid contractor responsible on a continuing basis for the environmental care and maintenance and ultimate closure and reclamation of the former UKHM mineral properties. The ARSA provides that ERDC share the responsibility for the development of the ultimate closure plan with the Government of Canada. Upon regulatory approval, the closure plan will be implemented by ERDC. During the period required to develop the plan and until the closure plan is executed, ERDC is also 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 \$850,000, adjustable for material changes in scope. ERDC receives agreed-to commercial contractor rates when retained by the Government of Canada to provide environmental services in the District outside the scope of care and maintenance and closure and reclamation planning under the ARSA.

ERDC currently holds a Type B WUL under the Yukon Waters Act to undertake care and maintenance activities in the Keno Hill area. The Existing State of Mine ("ESM") Reclamation Plan at Keno Hill was completed in September 2018 and was subsequently submitted for environmental assessment by the YESAB. In February 2020 a final Evaluation Report was issued by YESAB. The next step requires ERDC to obtain a WUL amendment, which will be issued by the Yukon Water Board to authorize the activities necessary to effect closure of the site. After licencing, the ESM Reclamation Plan must be finalized for submission to Crown-Indigenous Relations and Northern Affairs Canada ("CIRNAC") for approval prior to proceeding into implementation and execution of the final cleanup project.

### ***Economic Climate***

Silver, lead and zinc are the primary metals found within the District historically. With respect to the economic climate during 2019, the price of silver rose steadily with an average silver price of US\$16.21 per ounce of silver during the year. Silver traded from a high of US\$19.31 per ounce of silver on September 4, 2019 to a low of US\$14.38 per ounce of silver on May 29, 2019, while lead traded between US\$1.04 to US\$0.82 per pound and zinc traded between US\$1.36 to US\$1.00 per pound. As at the date of this MD&A, spot commodity prices are approximately US\$16.90 per ounce silver, US\$0.84 per pound for lead and US\$0.89 per pound for zinc and the Canadian-US exchange rate is approximately US\$0.73 per CAD. Consensus investment analyst forecasts over the next two years for silver average approximately US\$18.15

per ounce of silver, for lead average approximately US\$0.92 per pound, and for zinc US\$1.03 per pound, with the Canadian-US exchange rate forecast at US\$0.76 per CAD (see “Risk Factors” in the MD&A for the year ended December 31, 2019, 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).

## **2019 DEVELOPMENTS**

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### *2019 Pre-Feasibility Study*

On March 28 2019, Alexco announced the results of an independent PFS on the Keno Hill Silver Project (the “Project”), in a news release entitled “Alexco Announces Positive Pre-Feasibility Study for Expanded Silver Production at Keno Hill Silver District” and on May 8, 2019, and as amended February 13, 2020, the Corporation released the updated Technical Report entitled “NI 43-101 Technical Report on Preliminary Feasibility Study of the Keno Hill Silver District Project, Yukon Territory, Canada”.

The Project contemplates the conventional mining and milling of silver-lead-zinc ore from four deposits in the District. There is an existing 400 tonne per day (“t/d”) mill which will process a high grade silver-lead-zinc ore from four deposits across the District. Over the eight-year mine life contemplated in this PFS, the mines are expected to produce 1.18 M tonnes of ore at an average 805 g/t Ag, 2.98% lead (“Pb”), 4.13% zinc (“Zn”) and 0.34 g/t gold (“Au”). Following commissioning, the mill is expected to produce two concentrates; a high grade lead-silver LOM concentrate averaging 15,890 g/t Ag, 54% Pb, and 3.7 g/t Au, and a zinc-silver LOM concentrate averaging 649 g/t Ag and 53% Zn. The annualized silver content in concentrate is estimated to be 4.0 M ounces (“oz”).

The mine plan is based on conventional mining methods. Based on the orientation, width of the veins, review of historic mining in the District, and geotechnical information, a combination of mechanized overhand cut and fill, and longhole stoping with cemented rock fill have been selected as the appropriate mining methods for all four deposits. The deposits require the use of mining methods that can adequately support the veins and that are flexible and selective while minimizing the direct mining costs. The backfill is planned to be a mixture of waste rock fill and tailings from the dry stack tailings facility with cement added as required.

The initial capital cost is estimated to be \$23,200,000, net of \$11,900,000 of offsetting pre-production revenue from concentrate sales. This initial capital (pre-production prior to achieving positive cash flow) comprises \$17,900,000 of mine development and property, plant, and equipment and \$5,300,000 of net working capital for the initial construction and ramp up period of five months. The life-of-mine (“LOM”) sustaining capital is estimated at \$76,500,000, primarily for ongoing mine development.

The direct operating costs for the Project are estimated at a total of \$362,000,000 or \$312 per tonne of ore. These comprise \$226,000,000 direct mine costs, \$70,000,000 of direct mill costs, and \$67,000,000 for site general and administrative costs (excluding corporate). All-in sustaining costs (“AISC”) are estimated at US\$11.98/oz Ag (based on the PFS metal prices).

The project economics from the PFS show this to be a robust project with low capital and high returns with a pre-tax net present value at a 5% discount rate (“NPV<sub>5</sub>”) of \$136,200,000 and after-tax NPV<sub>5</sub> of \$101,200,000. The pre-tax internal rate of return (“IRR”) is estimated to be 84% and after-tax IRR is estimated to be 74%. Considering the Project on a stand-alone basis, the undiscounted after-tax cash flow totals are estimated to be \$129,300,000 over the mine life. Simple payback is estimated to occur approximately two years from start of production, approximately 26 months after the end of the initial capital period.

A summary of the probable mineral reserve estimates are below:

**Summary of Probable Mineral Reserves Estimates**

Category	Property	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Contained Ag (oz)
Probable	Bellekeno	40,109	843	-	11.8	6.3	1,087,000
	Lucky Queen	70,717	1,244	0.12	2.6	1.4	2,828,000
	Flame & Moth	704,211	672	0.49	2.7	5.7	15,215,000
	Birmingham	362,343	972	0.13	2.6	1.3	11,323,000
<b>Total Probable Mineral Reserves</b>		<b>1,177,380</b>	<b>804</b>	<b>0.34</b>	<b>3.0</b>	<b>4.1</b>	<b>30,453,000</b>

Notes: See page 31 and 32 for full disclosure on estimated mineral reserves and resources. Refer to pages 1-9 of the PFS.

The PFS has been prepared in compliance with NI 43-101, and was compiled by Mining Plus Consulting Ltd. ("Mining Plus") with contributions from a team of Qualified Persons as such term is defined by NI 43-101. All mineral resources are classified following the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014), in accordance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines and with NI 43-101. The PFS is available on the Company's website at <https://www.alexcoresource.com/> as well as under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

*Keno Hill Development Strategy*

The Corporation is moving towards production in a two (2) phased approach. Phase 1 work commenced in June 2019 and focused on surface and mill capital improvements, mine and operations planning and permitting, while Phase 2 will commence only once the Corporation makes a positive production decision, which is subject to granting of the pending WUL and market conditions. Phase 2 work will focus on underground development in preparation for production from the Bellekeno and Flame & Moth deposits, mill commissioning and final underground development of the Birmingham deposit.

During 2019 the Corporation completed the planned surface capital construction activities at the Birmingham deposit, including the installation of the underground production-related portal, construction of a lined treatment pond, initial construction of a coarse ore storage pad and upgrading the existing haul road.

*2019 Exploration*

During 2019, the Corporation completed an 8,333 m, 29 hole surface exploration diamond drilling program:

- The program commenced in June 2019 with two drills sited in the vicinity of the Birmingham deposit, where 5,140 m were drilled in 10 holes targeting extensions of the shallower Northeast Zone reserve and resource, as well as testing the continuity and tenor of the high grade Birmingham mineralization at depth;
- On September 10, 2019 the Company announced initial results from the 2019 Birmingham "deep target" drilling program (see news release dated September 10, 2019, entitled "Alexco Intersects 8.1 Meters (True Width) at Composite Grade of 1,414 Grams per Tonne (45.5 oz/t) Silver at 'Birmingham Deep' Target") indicating this target is completely open and will require substantial follow-up;
- The remaining 19 holes and 3,193 m of drilling were targeted based on existing knowledge complimented by results from the 2018 geophysical survey flown over the Galena Hill area. The survey produced geophysical signatures indicating areas of similar structural and stratigraphic framework to the Birmingham deposit;



- On December 4, 2019 the Company announced final results from the 2019 exploration diamond drilling program (see news release dated December 4, 2019, entitled “Alexco Discovers New Zone of Silver Mineralization, 3.7 kilometers Northeast of Bermingham Deposit, Composite Assays to 832 Grams per Tonne Silver over 7.4 Meters True Width”), indicating a new discovery at the Inca target, including the following results:
  - K-19-0749 intersected the Inca vein over a true width of 7.44 m at a composite grade of 832 g/t (26.75 ounces per tonne (“oz/t”)) silver (“Ag”) from 142.61 m that included several intervals grading greater than 1,000 g/t Ag, such as 1.60 m true width at 1,190 g/t (38.26 oz/t) Ag from 142.61 m, and 0.75 m true width at 3,860 g/t (124.10 oz/t) Ag from 148.27 m.
  - K-19-0756 drilled 70 m from K-19-0749, intersected the Inca vein over a 5.50 m true width at a composite grade of 597 g/t (19.18 oz/t) Ag from 134.4 m, including 0.56 m true width at 2,070 g/t (66.55 oz/t) Ag from 135.84 m, and 1.18 m true width at 1,110 g/t (35.69 oz/t) Ag from 136.41 m. This hole also intersected 10.7% zinc over 5.50 m true width from 134.4 m.
  - K-19-0754 also drilled 70 m from K-19-0749, intersected the Inca vein over a 0.37 m true width grading 2,070 g/t (66.55 oz/t) Ag from 167.75 m within an 8.06 m true width interval mineralized zone from 161.00 m that averaged a composite grade of 127 g/t Ag.
- During 2019 the Corporation also focused on other exploration, including the shallow RAB drilling of six holes for 408 m and trenching to follow up on testing of blind mineralized structures on Galena Hill with signatures similar to that of Bermingham, that extend under shallow cover also identified by the detailed aerial geophysical survey conducted in late 2018.

## **2020 OUTLOOK**

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### ***Keno Hill Silver District***

#### *2020 Flame & Moth Development*

The Flame & Moth production decline is completed to 452 m and requires an additional 336 m of ramp and infrastructure development remains to reach the first ore level access at the Lightning Zone. In addition, a 100 m ventilation raise to surface will be required before commercial ore production can be achieved. Completion of the remaining ramp development, raise, and infrastructure will commence in Phase II of the development strategy once a positive production decision is made.

#### *2020 Bermingham Development*

The Bermingham deposit has underground development totaling 550 m of decline and supporting development completed. Approximately 210 m of ramp and infrastructure development remains to be driven to reach the first ore level access. In addition, a 170 m ventilation raise to surface will be required before commercial ore production can be achieved. Completion of the remaining ramp development, raise and infrastructure will commence in Phase II of the development strategy once a positive production decision is made.

#### *Permitting Update*

As of December 31, 2019, Alexco had the requisite permits and authorizations for development and future ore production from the Flame & Moth, Bermingham, Bellekeno, Lucky Queen, and Onek deposits.

Alexco is in the final steps of amending and renewing the primary WUL for mine-related activity in the District. A public hearing was held in mid-February 2020 and the Company expects the granting of the WUL renewal late in the first quarter of 2020. Once renewed the WUL will authorize the use of water and deposition of waste from mining and milling operations at the Bermingham, Flame & Moth, Bellekeno and Lucky Queen (and Onek) deposits for a period of 15 years.

### *Exploration*

For 2020, Alexco is planning a \$3.5 million, 11,500 m surface exploration drilling program incorporating both diamond and rotary air blast drilling as follows:

- The program will primarily focus on the Bermingham Deep target area, where exploration drilling in 2019 successfully confirmed the presence of wide, high-grade mineralization at depth below the Bermingham resource. The 2020 drilling program at the Bermingham Deep target will focus on previously proven targeting criteria and testing of a gently east-plunging stratigraphic-structural intersection that is thought to strongly influence the distribution of mineralization. The objective of the initial deep drilling program is to test for any significant expansion of the Bermingham resource. A successful program may provide the basis to launch a large-scale infill program either later in 2020 or in 2021.
- Further drilling is also planned at the Inca prospect, a 2019 discovery with significant silver grades at relatively shallow depths (see news release dated December 4, 2019 “Alexco Discovers New Zone of Silver Mineralization, 3.7 Kilometers Northeast of Bermingham Deposit, Composite Assays to 832 Grams Per Tonne Silver over 7.4 Meters True Width”). The focus will be to define and extend the mineralized zone, which is untested over a total strike length of 800 m and is open at depth.
- In addition to core drilling at the Bermingham deposit and the Inca prospect, the 2020 program will continue with generative drill exploration initially using a low impact rotary air blast drill. Additional airborne geophysics will also be completed over other areas of the District, as this has become an important component in targeting mineralized structures, especially for generative work in areas of cover.

## **RESULTS OF OPERATIONS**

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### *Mine Site Care and Maintenance*

Mine site care and maintenance costs for 2019 totaled \$2,062,000 compared to \$2,603,000 for 2018. The costs decreased in 2019 compared to 2018 as the Corporation had increased mill maintenance and refurbishment initiatives related to future recommissioning of the mill and related plant during 2018. Included in mine site care and maintenance costs is depreciation expense of \$1,244,000 for 2019 compared to \$1,292,000 for 2018.

### *ERDC*

During the year, under the contract with the Government of Canada for the remediation of legacy environmental conditions at Keno Hill, ERDC completed the Evaluation Process for the ESM Reclamation Plan and a final Evaluation Report by YESAB was issued in February 2020. In addition, ERDC continued with detailed engineering related to the final closure plan.

## *General and Administrative Expenses*

### *Alexco Corporate:*

Corporate general and administrative expenses for 2019 totaled \$9,667,000 compared to \$7,498,000 for 2018. These included non-cash costs in the amounts of \$4,285,000 in 2019 and \$2,649,000 in 2018, which relate to share-based compensation and amortization and depreciation expenses. The primary reason for the increase between 2019 and 2018 is as follows:

- In 2019 the Company recognized \$211,000 of amortization on ROU assets under IFRS 15
- The date of the annual bonuses and equity grants (stock options, RSUs, DSUs) were accelerated from January 2020 to December 2019. The result was that there were effectively two annual bonus pay-outs and two equity grants during 2019; one in January 2019 and one December 2019. The impact of the additional December 2019 bonus and equity grants were as follows:
  - Salaries expense increased by \$510,000
  - Share-based compensation expense increased by \$1,657,000
- Going forward the Corporation will now only make annual bonus payments and equity grants determinations, if any, in December of each year.

Furthermore, the Corporate general and administrative expenses are expected to normalize to reduced levels subsequent to the sale of AEG, which occurred on February 14, 2020.

### *Environmental Services (AEG):*

Environmental services general and administrative expenses for 2019 totaled \$7,417,000 compared to \$4,672,000 for 2018. The increase in general and administrative expenses in 2019 is mainly attributable to increased support required for new projects including two joint operation partnerships, one with Dena Nezziddi Limited Partnership (“DNLP”), to supply and operate a water treatment system at the Wolverine mine located in the southeastern Yukon and one with JDS Energy and Mining Inc. (“JDS”) to acquire the abandoned Mount Nansen Mine site (“Mount Nansen”). Furthermore, in 2019 there was additional investment in professional employees and support functions required to meet demand and growth in the business, which increased its revenues from \$19,880,000 in 2018 to \$29,206,000 in 2019.

## **Alexco Environmental Group (AEG)**

### *Highlights during 2019:*

- AEG recognized revenues of \$29,206,000 in 2019 for a gross profit of \$6,076,000 achieving a gross margin of 21% compared to revenues of \$19,880,000 for a gross profit of \$6,052,000 achieving a gross margin of 30% in 2018. The decrease in gross profit margin during the 2019 period was primarily related to expansion of the overall business as well as use of third party contractors to complete construction of a larger water treatment system complex in Ontario as two new longer-term projects coming online, which incurred higher up-front costs.
- On April 30, 2019, AEG entered into an agreement with the BMO for a revolving LOC for up to \$4 million with an interest rate of approximately 5.7% on drawn funds. No funds were drawn on the LOC as of December 31, 2019.
- On May 6, 2019 AEG and a joint venture partner, JDS, entered into agreement to acquire the abandoned Mount Nansen Mine site from the Government of Canada. AEG and JDS formed a limited partnership called Mount Nansen Remediation Limited Partnership (“MNR”) to enter into the agreement with Canada whereby Canada will pay MNR to remediate environmental contamination from previous mining activities at Mount Nansen. In addition, MNR has the right to pursue mining activities at Mount Nansen. AEG and JDS each own 50% in MNR as well as a newly formed general

partnership and will be jointly responsible for Mount Nansen project remediation work and will share equally in the project's profitability. Working alongside Canada, the Yukon Government and Little Salmon/Carmacks First Nations, AEG will be primarily responsible for permitting, design and care and maintenance while JDS will be responsible for the construction aspect of the Mount Nansen project. This long-term project is expected to take up to ten years to complete.

- During the third quarter, AEG entered into an agreement with the Yukon Government to provide water treatment services at the Wolverine mine site located in the Yukon, Canada. As part of this agreement, AEG entered into a joint arrangement with Dena Nezziddi Limited Partnership ("DNLP") to construct and operate a water treatment system until December 2020. AEG incurred upfront capital expenditures totalling \$1,100,000 for the water treatment system, which has been capitalized to property, plant and equipment. For fees relating specifically to construction of the water treatment system, the Corporation recorded \$800,000 in deferred revenue that will be recognized over the life of the contract.
- On February 14, 2020 the Corporation entered into a Share Purchase Agreement for the sale of AEG, to AEG Management led by AEG's President. Under the terms of the Agreement, AEG Management purchased all of the shares of AEG in consideration for payment to Alexco of \$13,350,000. On closing of the transaction, AEG Management paid \$12,100,000 in cash, with the balance of \$1,250,000 payable pursuant to a promissory note that matures on February 14, 2021. Alexco retained ownership of Elsa Reclamation & Development Company ("ERDC") and will execute the clean-up of historical mines in the District under its existing contractual arrangement with the Government of Canada.

#### **FOURTH QUARTER**

For the quarter ended December 31, 2019 Alexco reported a net loss of \$6,343,000 compared to a net loss of \$1,795,000 in 2018, the increase in loss primarily attributable to AEG incurring an operating loss of \$1,305,000 in the fourth quarter of 2019 versus income \$554,000 in the fourth quarter of 2018 as well as a result of the Company accelerating its annual bonus and equity grants from January 2020 to December 2019 resulting in additional salaries and share-based compensation expense of \$1,657,000 being recognized in the fourth quarter of 2019. AEG recognized revenues of \$6,079,000 in the fourth quarter of 2019 for a gross profit of \$1,150,000 achieving a gross margin of 19% compared to revenues of \$8,902,000 in the fourth quarter of 2018 for a gross profit of \$2,152,000 achieving a gross margin of 24%. The higher 2018 period revenue was attributed to commencement of a new project requiring construction of a Water Treatment Plant.

Mine site care and maintenance costs in the fourth quarter of 2019 totaled \$554,000 compared to \$319,000 for the same period in 2018. The increase in cost is mainly due to increased site-based costs to support general site functions for the period.

The Corporation's corporate general and administrative expenses in the fourth quarter of 2019 totaled \$3,897,000 compared to \$1,671,000 in the fourth quarter of 2018. The increase in the 2019 period relates primarily to share-based compensation expense and salaries and contractor's expense, as the Corporation changed its date for the annual bonus and stock option, restricted share unit and deferred share unit grants from occurring in January of the following year to December of the current year. As a result, the 2019 calendar year had two annual compensation grants, one bonus and equity grant in January 2019 and one bonus and equity grant in December 2019. The impact of this change was an additional \$1,657,000 being recognized in the fourth quarter of 2019.

AEG's environmental services general and administrative expenses in the fourth quarter of 2019 totaled \$2,079,000 compared to \$1,576,000 in the fourth quarter of 2018. The increase in general and administrative expenses in the 2019 period is attributable to increased support required for new projects including two joint operation partnerships with DNLP, to supply and operate a water treatment system at

the Wolverine mine located in the southeastern Yukon and with JDS on the Mount Nansen Mine site. Furthermore, in 2019 there has been additional investment in professional employees and support functions required to meet demand and growth in the business.

Note that the environmental services business (AEG) was sold on February 14, 2020. These expenses will no longer be incurred by Alexco after that date.

## SUMMARY OF QUARTERLY RESULTS

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

Period	Revenue	Gross Profit	Net Income (Loss)	Basic Income (Loss) per Share	Diluted Income (Loss) per Share	Expenditures Capitalized on Mineral Properties
2018-Q1	2,764	830	(3,261)	\$(0.03)	\$(0.03)	3,147
2018-Q2	3,545	1,368	(1,896)	\$(0.02)	\$(0.02)	4,812
2018-Q3	4,669	1,702	(1,548)	\$(0.01)	\$(0.01)	6,517
2018-Q4	8,902	2,152	(1,795)	\$(0.02)	\$(0.02)	3,163
<b>2018 Total</b>	<b>19,880</b>	<b>6,052</b>	<b>(8,501)</b>	<b>\$(0.08)</b>	<b>\$(0.08)</b>	<b>17,639</b>
2019-Q1	7,233	1,472	1,207	\$ 0.01	\$ 0.01	1,266
2019-Q2	8,694	2,034	(1,471)	\$(0.01)	\$(0.01)	1,690
2019-Q3	7,200	1,420	(2,308)	\$(0.02)	\$(0.02)	2,531
2019-Q4	6,079	1,150	(6,343)	\$(0.06)	\$(0.06)	1,794
<b>2019 Total</b>	<b>29,206</b>	<b>6,076</b>	<b>(8,915)</b>	<b>\$(0.08)</b>	<b>\$(0.08)</b>	<b>7,281</b>

Note: Sum of all the quarters may not add up to the yearly totals due to rounding

The net loss from the 2018 quarters reflect fair value adjustments from the Corporation's investments, site-based expenditures, mill maintenance initiatives and general and administrative expenses offset by a non-cash fair value gain related to the embedded derivative on the Wheaton streaming agreement. The net income from the first quarter of 2019 reflects a gain on the embedded derivative related to the Wheaton streaming agreement, offset by site-based expenditures along with general and administrative expenses of the Corporation. The net loss for the second quarter of 2019 reflects site-based expenditures along with general and administrative expenses, which were partially offset by a non-cash fair value gain related to the embedded derivative on the Wheaton streaming agreement. The net loss for the third quarter of 2019 reflects continued site-based expenditures at Keno Hill along with general and administrative expenses. The net loss for the fourth quarter of 2019 reflects increased non-cash costs related to a loss on the fair value of the derivative asset related to the Wheaton stream and an increase in share-based compensation expense.

The mineral property expenditures in the first quarter of 2018 mainly reflect the continued advancement of the underground exploration decline at the Birmingham deposit and the expenditures incurred in the second, third and fourth quarters of 2018 reflect completion of the advanced exploration decline, completion of the underground drilling program at the Birmingham deposit, commencement of the underground development decline at the Flame & Moth deposit and completion of a 15,314 m surface drilling program. The mineral property expenditures in 2019 mainly reflect continued work with independent contractors on the PFS, completion of the 2019 surface exploration drilling program and development infrastructure initiatives at site.

## Liquidity, Cash Flows and Capital Resources

### Liquidity

At December 31, 2019 the Corporation had cash and cash equivalents of \$6,841,000, and net working capital of \$10,090,000 compared to cash and cash equivalents of \$8,576,000 and net working capital of \$10,188,000 at December 31, 2018. The Corporation faces no known liquidity issues and is not aware of any significant credit risks in any of its financial assets. In addition, the Corporation's restricted cash and deposits at December 31, 2019 totalled \$2,777,000 compared to \$2,725,000 at December 31, 2018.

With its cash resources and net working capital on hand at December 31, 2019, and assuming no re-start of full scale mining operations within the next twelve months, Alexco anticipates it will have sufficient capital resources to service the working capital requirements of its mine site care and maintenance, exploration activities, environmental services business and corporate offices and administration, for at least the next 12 month period. As noted elsewhere in this MD&A, re-start of mining operations is dependent on a number of factors, including metal prices, foreign exchange rates, and an amended WUL. A re-start of underground production operations will require additional capital investment, in excess of the capital resources currently on hand. Because of these factors, combined with its long-term objectives for the exploration and development of its mineral properties, the Corporation is likely to require future additional funding.

Historically, Alexco's main sources of funding have been from mining operations, AEG and equity issuances. All sources of finance reasonably available will be considered to fund future requirements, 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 interests. There can be no assurance of a re-start of mining operations or continued access to finance 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.

Alexco's activities expose it to a variety of financial risks: market risk (currency risk), credit 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 5 of the Corporation's financial statements for the year ended December 31, 2019.

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

### Cash Flows

	Three Months Ended December 31		Year Ended December 31	
	2019	2018	2019	2018
Cash flow used in operating activities	\$ (2,061)	\$ (657)	\$ (7,219)	\$ (5,490)
Cash flow used in investing activities	(1,974)	(4,840)	(8,127)	(14,161)
Cash flow provided by financing activities	325	23	13,611	10,321
	\$ (3,710)	\$ (5,474)	\$ (1,735)	\$ (9,330)

Cash outflow in operating activities was \$2,061,000 for the fourth quarter of 2019 versus \$657,000 for the fourth quarter of 2018. The majority of cash outflow from operating activities during the 2019 period and 2018 period were expended on capital requirements for clients on AEG projects, site-based care and maintenance costs and general and administrative expenses. The increase in cash outflow in operating activities in 2019 relates to an increase in working capital related to AEG. Cash outflow from investing activities were \$1,974,000 for the fourth quarter of 2019 versus \$4,840,000 for the fourth quarter of 2018. The cash outflow from investing activities during the fourth quarter of 2019 related primarily to an additional investment on the joint operation project and expenditures related to the surface exploration program while the fourth quarter for 2018 related to the surface exploration program and work on the PFS. The cash inflows from financing activities were \$325,000 for the fourth quarter of 2019 versus a cash inflow of \$23,000 for the fourth quarter of 2018. The cash inflow from the 2019 and 2018 periods relates to proceeds from stock option exercises, partially offset by the repayment of office lease liabilities.

Cash used in operating activities was \$7,219,000 for 2019 versus \$5,490,000 for 2018. Cash consumed in operating activities during the 2019 and 2018 periods were expended on site-based care and maintenance costs and general and administrative costs. In addition, in 2019 there were higher up-front costs associated to the joint arrangements in AEG. Cash outflow from investing activities were \$8,127,000 for 2019 versus \$14,161,000 for 2018. The higher cash outflow in 2018 primarily related to the Birmingham underground advanced exploration program, increased surface exploration programs, underground development work at Flame & Moth deposit and work on the PFS. Furthermore, the Corporation acquired Contango in 2018. The outflows from investing activities in 2018 were partially offset with the release of restricted funds as a results of posting a surety bond for security at Keno Hill. Cash inflow in financing activities was \$13,611,000 for 2019 versus \$10,321,000 for 2018. The cash inflows in 2019 relate to two equity financings with net proceeds totalling \$10,836,000, along with proceeds from the exercise of warrants and stock options partially offset by the repayment of office lease liabilities, whereas the 2018 cash inflow relates to net proceeds of \$8,076,000 from a flow-through bought deal public offering along with \$2,245,000 from the exercise of warrants and stock options.

#### *Silver Purchase Agreement (“SPA”) with Wheaton*

On October 2, 2008 (with subsequent amendments on October 20, 2008, December 10, 2008, December 22, 2009, March 31, 2010, January 15, 2013, March 11, 2014 and June 16, 2014), the Corporation entered into a SPA with Wheaton under which Wheaton will receive 25% of the life of mine payable silver produced by the Corporation from its District properties. The SPA anticipated that the initial silver deliveries would come from the Bellekeno property. Under the SPA, the Corporation received up-front deposit payments from Wheaton totaling US\$50,000,000 and received further payments of the lesser of US\$3.90 (increasing by 1% per annum after the third year of full production) and the prevailing market price for each ounce of payable silver delivered, if as and when delivered. After the initial 40 year term of the streaming interest, the Corporation is required to refund the balance of any advance payments received and not yet notionally reduced through silver deliveries. The Corporation would also be required to refund the balance of advance payments received and not yet reduced if Wheaton exercised its right to terminate the streaming interest in an event of default by the Corporation. As of September 2013, Bellekeno mining operations were suspended in light of a reduced silver price environment.

On March 29, 2017 the Corporation and Wheaton amended the SPA (the “Amended SPA”) such that Wheaton will continue to receive 25% of the life of mine payable silver from the District with a variable production payment based on monthly silver head grade and monthly silver spot price. The actual monthly production payment from Wheaton is determined based on the monthly average silver head grade at the mill and the monthly average spot price, as determined by a grade and pricing curve with an upper ceiling grade of 1,400 g/t silver and price of US\$25 per ounce of silver and a floor grade of 600 g/t silver and price of US\$13 per ounce of silver. Additional terms of the amendment include a date for completion of the 400 tpd mine and mill completion test, which has now been extended to December 31, 2020. If the completion test is not satisfied by December 31, 2020, the Corporation may be required to pay a capacity related refund to Wheaton in the maximum amount of US\$8,788,000, which can be further proportionately reduced by

mine production and mill throughput exceeding 322 tonnes per day for a 30 day period prior to December 31, 2020. The Amended SPA is secured against the Corporation's mineral properties until repayment of the original deposit of US\$50,000,000.

As at December 31, 2019, the fair value of the embedded derivative was calculated based on the discounted future cash flows associated with the difference between the original US\$3.90 per ounce production payment Wheaton would pay for each payable ounce delivered under the SPA and the new production payment under the Amended SPA which varies depending on the monthly silver head grade and silver price. The model relies upon inputs from the PFS, such as payable ounces expected to be delivered, head grade and silver price and will continue to be updated as a result of any updated studies, mine plans and actual production. A discount rate of 12.75%, representing the implied discount rate applied to the payment made under the Amended SPA was used to calculate the net present value. There were adjustments totalling \$5,489,000 recorded during 2019 (2018 - \$3,071,000) primarily as a result of the updated PFS results including an updated mine plan with increased silver production. See "Guidance on Embedded Derivative" below.

### *Capital Resources*

On June 7, 2019, the Corporation completed a bought deal public offering and issued 6,500,000 common shares at a price of US\$1.00 (\$1.33) per share for aggregate gross proceeds of US\$6,500,000 (\$8,634,000). The Corporation incurred share issuance costs of \$965,000 for net cash proceeds of \$7,669,000.

On April 23, 2019 the Corporation completed a private placement, on a bought deal basis, of 1,842,200 flow-through common shares at a price of \$1.90 per share for gross proceeds of \$3,500,000. The flow-through common shares are comprised of: (i) 1,579,000 CEE Shares priced at C\$1.90 per CEE Share; and (ii) 263,200 CDE Shares priced at C\$1.90 per CDE Share.

On April 30, 2019, AEG entered into an agreement with BMO for the LOC up to \$4,000,000. The LOC has an interest rate of approximately 5.7% on drawn funds, is secured against all AEG assets and has the following covenants (specific to AEG entities) in place to be tested on a quarterly basis as follows:

- Maintain debt service coverage ratio greater or equal 1.25:1 – first test to occur on June 30, 2020
- Maintain current ratio greater than or equal to 1.25:1 – first test occurred on June 30, 2019

On June 14, 2018, the Corporation completed an offering, on a bought deal basis, of 4,703,000 flow-through common shares at a blended price of approximately \$1.92 per share for gross proceeds of \$9,041,150. The securities issued under the offering were comprised of (i) 966,500 flow-through shares with respect to "Canadian exploration expenses" issued at \$2.05 per share; (ii) 1,736,500 flow-through shares with respect to "Canadian exploration expenses" that also qualify as "flow-through mining expenditures" issued at \$2.05 per share; and (iii) 2,000,000 flow-through shares with respect to "Canadian development expenses" issued at \$1.75.

On February 23, 2018 the Corporation entered into a definitive credit agreement with Sprott Private Resource Lending (Collector), L.P. ("Sprott") to provide a US\$15,000,000 credit facility (the "Credit Facility") on the following key terms:

- Term of 3 years, Maturity Date – February 23, 2021
- Interest rate on funds drawn down: the greater of
  - 7% plus US Dollar 3 month LIBOR and
  - 8% per annum, payable monthly
- Repayable in quarterly installments from October 31, 2019 through to the Maturity Date



- Upon draw down of funds a 3% charge of the draw down is charged
- 1,000,000 share purchase warrants were issued to Sprott with a five-year term, an exercise price of \$2.25 per share and a right by the Corporation to accelerate the expiry date to 30 days following the closing price of the shares exceeding \$5.63 for more than 20 consecutive trading days
- Repayable in whole or in part, without penalty, provided not less than twelve (12) months of interest has been paid on any outstanding amount
- On February 14, 2019 the Corporation extended the availability period of draw down to August 23, 2019 from February 23, 2019 by issuing to Sprott 171,480 Alexco common shares

The Credit Facility was not drawn down and on August 23, 2019 Alexco and Sprott agreed to let the Credit Facility expire. Sprott provided Alexco with a non-binding indicative term sheet for a new credit facility on similar terms to the Credit Facility above, which Alexco can enter into once it makes a positive production decision.

On September 21, 2018 the Corporation filed a short form base shelf prospectus 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 would allow 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 September 21, 2018.

On February 14, 2020, the Corporation completed the sale of AEG to AEG Management in consideration of \$13,350,000 of which \$12,100,000 was paid in cash on closing with the balance of \$1,250,000 payable pursuant to a promissory note that matures on February 14, 2021.

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

Contractual Obligations (expressed in thousands of dollars)	Payments Due by Period				
	Total	Less than 1 year	1 – 3 years	3 – 5 years	After 5 years
Leases	\$ 1,817	\$ 540	\$ 988	\$ 289	\$ Nil
Purchase obligations	360	60	180	120	Nil
Decommissioning and rehabilitation provision (undiscounted basis)	7,463	230	741	136	6,356
<b>Total</b>	<b>\$ 9,640</b>	<b>\$ 830</b>	<b>\$ 1,909</b>	<b>\$ 545</b>	<b>\$ 6,356</b>

### **Guidance on Embedded Derivative**

As discussed above, the valuation model for the embedded derivative related to the Wheaton SPA currently relies upon inputs from the PFS, such as payable ounces delivered and head grade, and will be updated as a result of updated studies, mine plans and actual production. Furthermore the valuation model for the embedded derivative was updated to utilize a probability based dynamic pricing structure as opposed to a static pricing structure. As such, the discount rate used and silver price assumptions are updated quarterly based on the risk-free yield curve and silver price forward curve at quarter end.

Based on assumptions used in the dynamic valuation model the value of the derivative asset as at December 31, 2019 is \$15,160,000. If, for example, the silver price was to decline to US\$13 per ounce and all other assumptions remained the same, the approximate derivative asset value would be \$22,302,000.

Similarly, if the silver price was to increase to US\$25 per ounce and all other assumptions remained the same, the approximate derivative asset value would be (\$1,652,000). The impacts of these swings in derivative asset value are recorded on the Statement of Profit and Loss through Other Income (Expenses) (see note 9 in the consolidated financial statements for years ended December 31, 2019 and 2018). The inputs that to date have had the greatest influence on the dynamic valuation model include changes in silver prices, anticipated mine plan silver production, interest rate yield curve, US dollar relative strength and time to production realization.

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
Silver Price Increase	Decrease
Silver Price Volatility Increase	Decrease
Mill Silver Head Grade Increase	Decrease
Decrease in timeframe to reach production	Increase
Foreign Exchange: US dollar appreciates compared to CDN dollar	Increase
Risk Free Yield Increase	Decrease

Management expects that changes in the fair market value of the embedded derivative asset prior to mine production will largely be driven by the risk-free yield curve and silver price forward curve as well as proximity to production date. In a market where the price of silver is static, these changes are expected to be nominal relative to a production scenario, at which time management expects the variability of the fair value adjustments to increase significantly as silver ounces are mined and delivered to Wheaton.

### Share Data

As at the date of this MD&A, the Corporation has 119,994,664 common shares issued and outstanding. In addition, there are outstanding incentive share options exercisable into a further 9,867,900 common shares, restricted share units to be settled by way of common shares issued from treasury for a further 412,006 common shares and deferred share units to be settled by way of common shares issued from treasury for a further 280,000 common shares.

### Financial Instruments

All of Alexco's cash and cash equivalents at December 31, 2019 were held in the form of demand deposits. Alexco's restricted cash and deposits were held in the form of term deposits and demand deposits. Alexco's

other financial instruments were its trade and other accounts receivable, its accounts payable and accrued liabilities, and its investment in marketable securities.

At December 31, 2019, a total of \$2,777,000 of Alexco'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 Alexco's mineral properties. The balance of Alexco's restricted cash and deposits represent security provided in respect of certain long-term operating lease commitments. The term deposits held at December 31, 2019 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 using the effective interest method. All term deposits held are high grade, low risk investments, generally yielding between 1% and 2% per annum, and their carrying amounts approximate their fair values given their short terms and low yields.

The carrying amounts of Alexco'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 and embedded derivative are marked to fair value at each balance sheet date. The fair values of all of Alexco's financial instruments measured at December 31, 2019, 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 as Level 1 measurements.

Substantially all of Alexco'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.

Alexco's accounts and other receivables at December 31, 2019 total \$6,534,000, comprising primarily of AEG trade receivables and goods and services tax refunds receivable from government. While the Corporation is exposed to credit losses due to the non-performance of its counterparties, there are no significant concentrations of credit risk and the Corporation does not consider this to be a material risk. The Corporation's customers with whom the current business operations are with include government bodies and reputable businesses. For its trade receivables, the Corporation applies the simplified approach for determining expected credit losses, which require the Corporation to determine the lifetime, expected losses for all its trade receivables. The expected lifetime credit loss provision for its trade receivables is based on historical counterparty default rates and adjusted for relevant forward looking information, when required. Because of factors including that the majority of its customers are considered to have low default risk and the Corporation does not extend credit to customers with a high default risk, the historical default rates are low and the lifetime expected credit loss allowance for trade receivables is nominal as at December 31, 2019. Accordingly, the Corporation did not record any adjustment relating to the implementation of the expected credit loss model for its trade receivables.

Substantially all of Alexco's property, plant and equipment and mineral properties are located in Canada; all of its mining operations and mineral exploration occur in Canada; and a significant portion of AEG's revenues are earned in Canada. However, a significant portion of AEG's revenues are in US dollars, and receivables arising therefrom are accordingly denominated in US dollars. Also, while a significant majority of the Corporation's operating costs are denominated in Canadian dollars, it does have some exposure to costs, and therefore accounts payable and accrued liabilities, 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.

## Off-Balance Sheet Arrangements

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

## Related Party Transactions

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The Corporation's related parties include its subsidiaries and key management personnel. Key management includes the Corporation's Board of Directors and members of senior management. Key management compensation for the years ended December 31, 2019 and 2018 was as follows:

	Three Months Ended December 31,		Year Ended December 31,	
	2019	2018	2019	2018
Salaries and other short-term benefits	\$ 566	\$ 520	\$ 2,614	\$ 2,130
Share-based compensation	1,131	498	2,990	2,513
	\$ 1,697	\$ 1,018	\$ 5,604	\$ 4,643

Subsequent to the year ended December 31, 2019, on February 14, 2020, pursuant to the Share Purchase Agreement, Alexco sold AEG to AEG Management led by AEG's President.

See page 4 of this MD&A under the section 'AEG', which discusses potential impacts to Alexco's operations as a result of the sale of AEG.

## Critical Accounting Estimates and Judgments

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The Corporation's significant accounting policies as well as significant judgment and estimates are presented in Notes 3 and 5 of Alexco's December 31, 2019 annual consolidated financial statements.

## Summary of New and Amended Accounting Policies

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The Corporation adopted IFRS 16 Leases ("IFRS 16") effective January 1, 2019 using the modified retrospective approach. The modified retrospective approach does not require restatement of prior period financial information and the prior period financial information continues to be reported under IAS 17, Leases ("IAS 17") and IFRIC 4, *Determining Whether an Arrangement Contains a Lease* ("IFRIC 4"). IFRS 16 provides a single lessee accounting model, requiring lessees to recognize a right-of-use ("ROU") asset and a lease obligation at the lease commencement date.

The Corporation completed its review of all existing operating leases and service contracts to identify contracts in scope for IFRS 16 and assessed contracts for embedded leases. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset, and the Corporation has the right to obtain substantially all of the economic benefits from the use of the asset during the term of the arrangement. The Corporation incorporates both the lease and non-lease components as part of the total lease payment, as the Corporation elected not to separate non-lease components.

The Corporation, on adoption of IFRS 16, recognized lease liabilities in relation to office leases which had previously been classified as operating leases under the principles of IAS 17. In relation, under the principles of the new standard these leases are measured as lease liabilities at the present value of the remaining lease payments, discounted using the Corporation's incremental borrowing rate as at January 1, 2019. The associated ROU assets have been measured at an amount equal to the lease liability on

January 1, 2019. The ROU asset is subsequently depreciated from the commencement date to the earlier of the end of the lease term, or the end of the useful life of the asset. Furthermore, the ROU asset may be reduced due to impairment losses.

On initial adoption, the Corporation recorded right-of-use assets of \$1,883,000 within property, plant and equipment, measured at an amount equal to the lease liability. The Corporation has elected to use the following practical expedients permitted under the standard:

- Apply a single discount rate to a portfolio of leases with similar characteristics;
- Account for leases with a remaining term of less than twelve (12) months as at January 1, 2019 as short-term leases, recognized as an expense over the lease term; and
- Account for lease payments as an expense and not recognize a ROU asset if the underlying asset is of low dollar value (less than \$5,000).

The following table reconciles the Corporation's operating lease commitments at December 31, 2018, as previously disclosed in the Corporation's annual consolidated financial statements, to the lease liability recognized on adoption of IFRS 16 at January 1, 2019.

	<b>Adoption of IFRS 16</b>
Lease commitments as at December 31, 2018	\$ 1,440
Less:	
Short-term commitments	(50)
Add:	
Operating lease obligations on adoption of IFRS 16	1,048
	<u>2,438</u>
Impact of discounting	<u>(555)</u>
Lease liability as of January 1, 2019	<u>\$ 1,883</u>

### **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.

### **Net Working Capital**

Consolidated net working capital comprises those components of current assets and liabilities which support and results 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, investments, inventories, and prepaids expenses and other, less accounts payable and accrued liabilities, lease liabilities, and environmental services

contract loss provision. Excluded components are deferred revenue and flow-through share premium pending renunciation.

### ***All-In Sustaining Costs (“AISC”)***

AISC is a non-GAAP financial measure that does not have any standardized meaning prescribed by IFRS and is therefore unlikely to be comparable to similar measures presented by other companies. Alexco has adopted the practice of calculating this performance measure as the net cost of producing an ounce of silver (primary payable metal) after deducting revenues gained from incidental by-product production. This performance measurement has been commonly used in the mining industry as a relatively simple way of comparing the net production costs of the primary metal for a specific period against the prevailing market price of that metal. AISC are based on total silver ounces sold and are calculated on a per ounce basis net of credits for realized revenues from all metals other than silver. As of the date of the MD&A, the Corporation is not in production and only uses AISC when referencing its PFS, with an effective date of March 28, 2019.

## **Internal Control Over Disclosure Controls and Procedures and Financial Reporting**

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### *Disclosure Controls and Procedures*

Alexco’s management, with the participation of its Chief Executive Officer and Chief Financial Officer, have evaluated the effectiveness of the Corporation’s disclosure controls and procedures. Based upon the results of that evaluation, the Alexco’s Chief Executive Officer and Chief Financial Officer have concluded that, as of the date of this MD&A, Alexco’s disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by Alexco in reports it files under applicable securities legislation is recorded, processed, summarized and reported within the appropriate time periods and forms specified in those rules and include controls and procedures designed to ensure that information required to be disclosed by Alexco in reports it files under applicable securities legislation is accumulated and communicated to Alexco’s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

### *Internal Control Over Financial Reporting*

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, 2019, 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, 2019.

The effectiveness of Alexco's internal control over financial reporting as at December 31, 2019 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, 2019 that has materially affected, or is reasonably likely to materially affect, Alexco's internal control over financial reporting.

## **Risk Factors**

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The following are major risk factors management has identified which relate to Alexco's business activities. Such risk factors, 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. Though the following are major risk factors identified by management, they do not comprise a definitive list of all risk factors related to the Corporation's business and operations. 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 in Alexco's Annual Information Form ("AIF") for the year ended December 31, 2019.

### *Negative Cash Flow From Operating Activities*

The Corporation has not yet consistently achieved positive operating cash flow, and there are no assurances that the Corporation will not experience negative cash flow from operations in the future. The Corporation has incurred net losses in the past and may incur losses in the future and will continue to incur losses until and unless it can derive sufficient revenues from its mineral projects. Such future losses could have an adverse effect on the market price of the Corporation's common shares, which could cause investors to lose part or all of their investment.

### *Forward-Looking Statements May Prove Inaccurate*

Readers are cautioned not to place undue reliance on forward-looking statements. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, of both a general and specific nature, that could cause actual results to differ materially from those suggested by the forward-looking statements. See "Preliminary Notes – Cautionary Statement Regarding Forward-Looking Statements".

### *Dilution*

The Corporation expects to require additional funds to finance its growth and development strategy. If the Corporation elects to raise additional funds by issuing additional equity securities, such financing may substantially dilute the interests of the Corporation's shareholders. The Corporation may also issue

additional securities in the future pursuant to existing and new agreements in respect of its projects or other acquisitions and pursuant to existing securities of the Corporation.

#### *Exploration, Evaluation and Development*

Mineral exploration, evaluation and development involves a high degree of risk and few properties which are explored are ultimately developed into producing mines. With respect to Alexco's properties, should any mineral resources exist, substantial expenditures will be required to confirm mineral reserves which are sufficient to commercially mine, and to obtain the required environmental approvals and permitting required to commence commercial operations. Should any mineral resource be defined on such properties there can be no assurance that the mineral resource on such properties can be commercially mined or that the metallurgical processing will produce economically viable and saleable products. The decision as to whether a property contains a commercial mineral deposit and should be brought into production will depend upon the results of exploration programs and/or technical studies, and the recommendations of duly qualified engineers and/or geologists, all of which involves significant expense. This decision will involve consideration and evaluation of several significant factors including, but not limited to: (1) costs of bringing a property into production, including exploration and development work, preparation of appropriate technical studies and construction of production facilities; (2) availability and costs of financing; (3) ongoing costs of production; (4) market prices for the minerals to be produced; (5) environmental compliance regulations and restraints (including potential environmental liabilities associated with historical exploration activities); and (6) political climate and/or governmental regulation and control.

The ability of Alexco to sell, and profit from the sale of any eventual production from any of the Alexco's properties will be subject to the prevailing conditions in the marketplace at the time of sale. Many of these factors are beyond the control of Alexco and therefore represent a market risk which could impact the long-term viability of Alexco and its operations.

#### *Infrastructure*

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. The lack of availability on acceptable terms or the delay in the availability of any one or more of these items could prevent or delay exploitation and or development of the Corporation's properties. If adequate infrastructure is not available in a timely manner, there can be no assurance that the exploitation and or development of the Corporation's properties will be commenced or completed on a timely basis, if at all; that the resulting operations will achieve the anticipated production volume; or that the construction costs and ongoing operating costs associated with the exploitation and or development of the Corporation's properties will not be higher than anticipated. In addition, unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Corporation's operations and profitability.

#### *Figures for the Alexco's Resources are Estimates Based on Interpretation and Assumptions and May Yield Less Mineral Production Under Actual Conditions than is Currently Estimated*

In making determinations about whether to advance any of its projects to development, the Corporation must rely upon estimated calculations as to the mineral resources and grades of mineralization on its properties. Until ore is actually mined and processed, mineral resources and grades of mineralization must be considered as estimates only. The determination of the Corporation's estimated mineral resources by appropriately qualified persons requires significant judgements regarding the interpretation of complex geological and engineering data including the size, depth, shape and nature of the deposit and anticipated plans for mining, as well as estimates of future commodity prices, foreign exchange rates, capital requirements and production costs. These geological interpretations and statistical inferences used to develop the mineral resource estimates are imprecise and are drawn from drilling and sampling which may prove to be unreliable. Alexco cannot be certain that:



- reserve, resource or other mineralization estimates will be accurate; or
- mineralization can be mined or processed profitably.

Any material changes in mineral resource estimates and grades of mineralization will affect the economic viability of placing a property into production and a property's return on capital. Alexco's resource estimates have been determined and valued based on assumed future prices, cut-off grades and operating costs that may prove to be inaccurate. Extended declines in market prices for silver, gold, lead, zinc and other commodities may render portions of Alexco's mineralization uneconomic and result in reduced reported mineral resources.

#### *Amendments to Silver Purchase Agreement with Wheaton*

The March 29, 2017 Amended SPA with Wheaton, requires that to satisfy the completion test under the Amended SPA, the Corporation will need to recommence operations on the KHSD Property and operate the mine and mill at 400 tonnes per day on or before December 31, 2020. If the completion test is not satisfied by December 31, 2020, the outcome could materially adversely affect the Corporation as it may be required to pay a capacity related refund to Wheaton in the maximum amount of US\$8,788,000, which can be further reduced by mill throughput exceeding 322 tonnes per day prior to December 31, 2020. The Corporation would need to raise additional capital to finance the capacity related refund and there is no guarantee that the Corporation will be able to raise such additional capital. In the event that the Corporation cannot raise such additional capital, the Corporation will default under the terms of the Amended SPA. The valuation model for the embedded derivative asset related to the SPA with Wheaton is based on a number of assumptions. The value of the derivative asset as at December 31, 2019 is \$15,160,000. If, for example, the silver price were to increase to US\$25.00 per ounce, and all other assumptions remained the same, the approximate derivative asset value would be negative (\$1,562,000) and would be classified as a derivative liability.

#### *Keno Hill Silver District*

While Alexco has conducted exploration activities in the KHSD, further review of historical records and additional exploration and geological testing will be required to determine whether any of the mineral deposits it contains are economically recoverable. There is no assurance that such exploration and testing will result in favourable results. The history of the Keno Hill District has been one of fluctuating fortunes, with new technologies and concepts reviving the District numerous times from probable closure until 1989, when it did ultimately close down for a variety of economic and technical reasons. Many or all of these economic and technical issues will need to be addressed prior to the commencement of any future production on the Keno Hill properties.

#### *Mining Operations*

The business of exploration for minerals and mining involves a high degree of risk. Few properties that are explored are ultimately developed into mineral deposits with significant value. Decisions by the Corporation to proceed with the construction and development of mines, including Bellekeno, are based on development plans which include estimates for metal production and capital and operating costs. Until completely mined and processed, no assurance can be given that such estimates will be achieved. Failure to achieve such production and capital and operating cost estimates or material increases in costs could have an adverse impact on the Corporation's future cash flows, profitability, results of operations and financial condition. The Corporation's actual production and capital and operating costs may vary from estimates for a variety of reasons, including: actual resources mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors, such as the need for sequential development of resource bodies and the processing of new or different resource grades; revisions to mine plans; risks and hazards associated with mining; natural phenomena, such as inclement weather conditions, water availability, floods, fire, rock falls and earthquakes, unusual or unexpected ground

conditions, geological formation pressures, equipment failure and failure of retaining dams around tailings disposal areas which may result in, among other adverse effects, environmental pollution and consequent liability; and unexpected labour shortages or strikes. Costs of production may also be affected by a variety of factors, including changing waste ratios, metallurgical recoveries, labour costs, commodity costs, general inflationary pressures and currency rates. In addition, the risks arising from these factors are further increased while any such mine is progressing through the ramp-up phase of its operations and has not yet established a consistent production track record. No assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis.

Furthermore, mining operations at the Bellekeno mine project were suspended as of early September 2013 as a result of sharp and significant declines in precious metals prices during the second quarter of 2013. Re-start of mining operations is dependent on a number of factors, including sustained improvements in silver markets, the effectiveness of cost structure reduction measures, the maintenance of current metal prices and the fluctuation of foreign exchange rates and the uncertainties around the results of these factors are significant. A re-start of underground production operations will require additional capital investment in excess of the capital resources currently on hand. There can be no assurance of a re-start of 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/or defer its planned exploration and development activities.

#### *Employee Recruitment and Retention*

Recruitment and retention of skilled and experienced employees is a challenge facing the mining sector as a whole. During the late 1990s and early 2000s, with unprecedented growth in the technology sector and an extended cyclical downturn in the mining sector, the number of new workers entering the mining sector was depressed and significant number of existing workers departed, leading to a so-called “generational gap” within the industry. Since the mid-2000s, this factor was exacerbated by competitive pressures as the mining sector experienced an extended cyclical upturn. Any re-start of mining operations will necessitate the re-hiring of mine and mill personnel. It may be difficult for Alexco to find and hire qualified people in the mining industry who are situated in the Yukon, or to obtain all of the necessary services or expertise in Yukon or to conduct operations on Alexco’s projects at reasonable rates. If qualified people and services or expertise cannot be obtained in the Yukon, we may need to seek and obtain those services from people located outside of this area, which may require work permits and compliance with applicable laws and could result in delays and higher costs.

#### *Dependence on Management*

The success of the operations and activities of the Corporation is dependent to a significant extent on the efforts and abilities of its management team. The Corporation does not maintain key employee insurance on any of its employees. The Corporation depends on key personnel and cannot provide assurance that it will be able to retain such personnel. Failure to retain such key personnel could have a material adverse effect on the Corporation’s business and financial condition.

#### *Permitting and Environmental Risks and Other Regulatory Requirements*

The current or future operations of the Corporation, including development activities, commencement of production on its properties and activities associated with the Corporation’s mine reclamation and remediation business, require permits, approvals, authorizations, or licenses from various federal, territorial and other governmental authorities, and such operations are and will be governed by laws, regulations and agreements governing prospecting, development, mining, production, taxes, labour standards, occupational health, waste disposal, toxic substances, land use, environmental protection, mine safety and other matters. Companies engaged in the development and operation of mines and related facilities and in mine reclamation and remediation activities generally experience increased costs and delays as a result

of the need to comply with the applicable laws, regulations and permits. There can be no assurance that all permits, permit modifications, approvals, authorizations, licenses, and license modifications which the Corporation may require for the conduct of its operations will be obtainable on reasonable terms or that such laws and regulations would not have an adverse effect on any project which the Corporation might undertake. Specifically, the Corporation requires a renewal of its WUL in order for it to be fully permitted for the ore production and processing from the Birmingham deposit and the Flame & Moth, Lucky Queen, Bellekeno and Onek deposits. Additionally, subsequent to completion of the environment assessment of the Corporation's Existing State of Mine Reclamation Plan at Keno Hill by the Yukon Environmental and Social-Economic Assessment Board, the Corporation will need an amendment to its WUL by the Yukon Water Board to authorize the activities necessary to effect closure of the site. There can be no guarantee that the Corporation will receive the amendments and the renewal. Additionally, delays in receiving any requisite license amendments and renewals could adversely affect the Corporation's profitability. The Corporation had originally expected to receive the WUL renewal in 2019. However subsequent delays in the permitting process have extended the time expected for award of the final license to the first quarter of 2020.

Any failure by the Corporation to comply with applicable laws, regulations and permitting requirements may result in enforcement actions including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions against the Corporation. The Corporation may be required to compensate those suffering loss or damage by reason of the Corporation's mining operations or mine reclamation and remediation activities and may have civil or criminal fines or penalties imposed upon it for violation of applicable laws or regulations.

Amendments to current laws, regulations and permits governing operations and activities of mining companies and mine reclamation and remediation activities could have a material adverse impact on the Corporation. As well, policy changes and political pressures within and on federal, territorial and First Nation governments having jurisdiction over or dealings with Alexco could change the implementation and interpretation of such laws, regulations and permits, also having a material adverse impact on Alexco. Such impacts could result in one or more of increases in capital expenditures or production costs, reductions in levels of production at producing properties or abandonment or delays in the development of new mining properties.

#### *Surety Bonding Risks*

Alexco secures its obligations for reclamation and closure costs with surety bonds provided by leading global insurance companies in favour of regulatory authorities in the Yukon. These surety bonds include the right of the surety bond provider to terminate the relationship with Alexco on providing notice of up to 90 days. The surety bond provider would, however, remain liable to the regulatory authorities for all bonded obligations existing prior to the termination of the bond in the event Alexco failed to deliver alternative security satisfactory to the regulator. Alexco may require substantial additional capital to accomplish its exploration and development plans and fund strategic growth and there can be no assurance that financing will be available on terms acceptable to Alexco, or at all. Alexco may require substantial additional financing to advance the KHSD to production. These financing requirements could adversely affect Alexco's ability to access the capital markets in the future. Failure to obtain sufficient financing, or financing on terms acceptable to Alexco, may result in a delay or indefinite postponement of exploration, development or production at its properties. Additional financing may not be available when needed and the terms of any agreement could impose restrictions on the operation of our business. Failure to raise financing when needed could have a material adverse effect on our business, financial condition, results of operations and prospects.

### *Potential Profitability of Mineral Properties Depends Upon Factors Beyond the Control of Alexco*

The potential profitability of mineral properties is dependent upon many factors beyond the Corporation's control. For instance, world prices of and markets for gold, silver, lead and zinc are unpredictable, highly volatile, potentially subject to governmental fixing, pegging and/or controls and respond to changes in domestic, international, political, social and economic environments – including international trade restrictions. During the year ended December 31, 2019, the prices of silver, lead and zinc have steadily declined. Another factor is that rates of recovery may vary from the rate experienced in tests and a reduction in the recovery rate will adversely affect profitability and, possibly, the economic viability of a property. Profitability also depends on the costs of operations, including costs of labour, materials, equipment, electricity, environmental compliance or other production inputs. Such costs will fluctuate in ways the Corporation cannot predict and are beyond the Corporation's control, and such fluctuations will impact on profitability and may eliminate profitability altogether. Mine site care and maintenance costs during 2019 totaled \$2,062,000 compared with \$2,603,000 for 2018. The increase in costs was mainly due to site-based expenditures and mill maintenance and refurbishment initiatives in 2019. Additionally, due to worldwide economic uncertainty, the availability and cost of funds for development and other costs have become increasingly difficult, if not impossible, to project. These changes and events may materially affect the financial performance of the Corporation.

### *First Nation Rights and Title*

The nature and extent of First Nation rights and title remains the subject of active debate, claims and litigation in Canada, including in the Yukon and including with respect to intergovernmental relations between First Nation authorities and federal, provincial and territorial authorities. There can be no guarantee that such claims will not cause permitting delays, unexpected interruptions or additional costs for Alexco's projects. These risks may have increased after the Supreme Court of Canada decision of June 26, 2014 in *Tsilhqot'in Nation v. British Columbia*.

### *Title to Mineral Properties*

The acquisition of title to mineral properties is a complicated and uncertain process. The properties may be subject to prior unregistered agreements of transfer, unregistered liens, or land claims, and title may be affected by undetected defects. Although the Corporation has made efforts to ensure that legal title to its properties is properly recorded in the name of the Corporation, there can be no assurance that such title will ultimately be secured. Title insurance generally is not available for mining claims in Canada. As a result, the Corporation may be constrained in its ability to operate its mineral properties or unable to enforce its rights with respect to its mineral properties. An impairment to or defect in the Corporation's title to its mineral properties would adversely affect the Corporation's business and financial condition.

### *Capitalization and Commercial Viability*

Alexco will require additional funds to further explore, develop and mine its properties. Alexco has limited financial resources, and there is no assurance that additional funding will be available to Alexco to carry out the completion of all proposed activities, for additional exploration or for the substantial capital that is typically required in order to place a property into commercial production. Although Alexco has been successful in the past in obtaining financing through the sale of equity securities, there can be no assurance that Alexco will be able to obtain adequate financing in the future or that the terms of such financing will be favourable. Failure to obtain such additional financing could result in the delay or indefinite postponement of further exploration and development of its properties.

### *General Economic Conditions May Adversely Affect Alexco's Growth and Profitability*

The unprecedented events in global financial markets since 2008 have had a profound impact on the global economy and led to increased levels of volatility. Many industries, including the mining industry, are

impacted by these market conditions. Some of the impacts of the current financial market turmoil include contraction in credit markets resulting in a widening of credit risk, devaluations and high volatility in global equity, commodity, foreign currency exchange and precious metal markets, and a lack of market liquidity. If the current turmoil and volatility levels continue they may adversely affect Alexco's growth and profitability. Specifically:

- a global credit/liquidity or foreign currency exchange crisis could impact the cost and availability of financing and Alexco's overall liquidity;
- the volatility of silver and other commodity prices would impact Alexco's revenues, profits, losses and cash flow;
- volatile energy prices, commodity and consumables prices and currency exchange rates would impact Alexco's operating costs; and
- the devaluation and volatility of global stock markets could impact the valuation of Alexco's equity and other securities.

These factors could have a material adverse effect on Alexco's financial condition and results of operations.

### *Operating Hazards and Risks*

In the course of exploration, development and production of mineral properties, certain risks, particularly including but not limited to unexpected or unusual geological operating conditions including rock bursts, cave-ins, fires, flooding and earthquakes, may occur. It is not always possible to fully insure against such risks and the Corporation may decide not to insure against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the securities of the Corporation.

Adverse weather conditions could also disrupt the Corporation's environmental services business and/or reduce demand for the Corporation's services.

### *Competition*

Significant and increasing competition exists for mining opportunities internationally. There are a number of large established mining companies with substantial capabilities and far greater financial and technical resources than the Corporation. The Corporation may be unable to acquire additional attractive mining properties on terms it considers acceptable and there can be no assurance that the Corporation's exploration and acquisition programs will yield any reserves or result in any commercial mining operation.

### *Certain of the Corporation's Directors and Officers are Involved with Other Natural Resource Companies, Which May Create Conflicts of Interest from Time to Time*

Some of the Corporation's directors and officers are directors or officers of other natural resource or mining-related companies. These associations may give rise to conflicts of interest from time to time. As a result of these conflicts of interest, the Corporation may miss the opportunity to participate in certain transactions.

### *The Corporation May Fail to Maintain Adequate Internal Control Over Financial Reporting Pursuant to the Requirements of the Sarbanes-Oxley Act.*

Section 404 of the Sarbanes-Oxley Act ("SOX") requires an annual assessment by management of the effectiveness of the Corporation's internal control over financial reporting. The Corporation may fail to maintain the adequacy of its internal control over financial reporting as such standards are modified, supplemented or amended from time to time, and the Corporation may not be able to ensure that it can conclude, on an ongoing basis, that it has effective internal control over financial reporting in accordance with Section 404 of SOX. The Corporation's failure to satisfy the requirements of Section 404 of SOX on an ongoing, timely basis could result in the loss of investor confidence in the reliability of its financial

statements, which in turn could harm the Corporation's business and negatively impact the trading price or the market value of its securities. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm the Corporation's operating results or cause it to fail to meet its reporting obligations. Future acquisitions of companies, if any, may provide the Corporation with challenges in implementing the required processes, procedures and controls in its acquired operations. No evaluation can provide complete assurance that the Corporation's internal control over financial reporting will detect or uncover all failures of persons within the Corporation to disclose material information otherwise required to be reported. The effectiveness of the Corporation's processes, procedures and controls could also be limited by simple errors or faulty judgments. Although the Corporation intends to expend substantial time and incur substantial costs, as necessary, to ensure ongoing compliance, there is no certainty that it will be successful in complying with Section 404 of SOX.

*As a "foreign private issuer", the Corporation is exempt from Section 14 proxy rules and Section 16 of the Securities Exchange Act of 1934*

The Corporation is a "foreign private issuer" as defined in Rule 3b-4 under the United States Securities Exchange Act of 1934, as amended (the "U.S. Exchange Act"). Equity securities of the Corporation are accordingly exempt from Sections 14(a), 14(b), 14(c), 14(f) and 16 of the U.S. Exchange Act pursuant to Rule 3a12-3 of the U.S. Exchange Act. Therefore, the Corporation is not required to file a Schedule 14A proxy statement in relation to the annual meeting of shareholders. The submission of proxy and annual meeting of shareholder information on Form 6-K may result in shareholders having less complete and timely information in connection with shareholder actions. The exemption from Section 16 rules regarding reports of beneficial ownership and purchases and sales of common shares by insiders and restrictions on insider trading in our securities may result in shareholders having less data and there being fewer restrictions on insiders' activities in our securities.

*It may be difficult to enforce judgments or bring actions outside the United States against the Corporation and certain of our directors*

The Corporation is a Canadian corporation and certain of its directors, officers and experts are neither citizens nor residents of the United States. A substantial part of the assets of the Corporation and of certain of these persons are located outside the United States. As a result, it may be difficult or impossible for an investor:

- to enforce in courts outside the United States judgments obtained in United States courts based upon the civil liability provisions of United States federal securities laws against these persons and the Corporation; or
- to bring in courts outside the United States an original action to enforce liabilities based upon United States federal securities laws against these persons and the Corporation.

*It may be difficult to anticipate the effects of the Coronavirus to the Corporation*

Readers are cautioned that the Corporation has not assessed the potential impacts, if any, that the Coronavirus may have on its business and operations, which could include the Company's ability to purchase products and/or services at reasonable costs in the operation of its business.

## Summary of Mineral Reserve and Resources Estimates

The following tables sets forth the estimated probable mineral reserves and estimated mineral resource estimates for Alexco's mineral properties within the KHSD:

### Summary of Probable Mineral Reserve Estimates

Category 1,2,4	Property	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Contained Ag (oz)
<i>Probable</i>	Bellekeno <sup>3</sup>	40,109	843	-	11.8	6.3	1,087,000
	Lucky Queen <sup>3</sup>	70,717	1,244	0.12	2.6	1.4	2,828,000
	Flame & Moth <sup>3</sup>	704,211	672	0.49	2.7	5.7	15,215,000
	Birmingham <sup>3</sup>	362,343	972	0.13	2.6	1.3	11,323,000
<b>Total Mineral Reserves</b>		<b>1,177,380</b>	<b>804</b>	<b>0.34</b>	<b>3.0</b>	<b>4.1</b>	<b>30,453,000</b>

Notes:

- All mineral reserves for this table have the effective date of March 28, 2019 and are classified following the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014), in accordance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines and the guidelines of NI 43-101.
- All numbers have been rounded to reflect the relative accuracy of the estimates.
- The Bellekeno, Lucky Queen, Flame & Moth and Birmingham deposits are incorporated into the current mine plan supported by disclosure in the news release dated March 28, 2019 entitled "Alexco Announces Positive Pre-Feasibility Study for Expanded Silver Production at Keno Hill Silver District" and the PFS filed on SEDAR dated February 13, 2020 with an effective date of March 28, 2019.
- The disclosure regarding the summary of probable mineral reserves 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.

### Summary of Indicated and Inferred Mineral Resource Estimates

(Indicated mineral resources are inclusive of probable mineral reserve estimates)

Category 1,2,3,7,9	Property	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Contained Ag (oz)
<i>Indicated</i>	Bellekeno <sup>2,4&amp;5</sup>	262,000	585	n/a	3.5	5.3	4,928,000
	Lucky Queen <sup>2,4&amp;6</sup>	132,300	1,167	0.2	2.4	1.6	4,964,000
	Flame & Moth <sup>2,4&amp;6</sup>	1,679,000	498	0.4	1.9	5.3	26,883,000
	Onek <sup>4&amp;6</sup>	700,200	191	0.6	1.2	11.9	4,300,000
	Birmingham <sup>2,4&amp;5</sup>	1,102,300	930	0.1	2.4	1.7	32,959,000
<b>Total Indicated Sub-Surface Deposits</b>		<b>3,875,800</b>	<b>594</b>	<b>0.3</b>	<b>2.0</b>	<b>5.3</b>	<b>74,034,000</b>
	Elsa Historical Tailings <sup>7</sup>	2,490,000	119	0.1	1.0	0.7	9,527,000
<b>Total Indicated All Deposits</b>		<b>6,365,800</b>	<b>408</b>	<b>0.3</b>	<b>1.6</b>	<b>3.5</b>	<b>83,561,000</b>
<i>Inferred</i>	Bellekeno <sup>4&amp;5</sup>	243,000	428	n/a	4.1	5.1	3,344,000
	Lucky Queen <sup>4&amp;6</sup>	257,900	473	0.1	1.0	0.8	3,922,000
	Flame & Moth <sup>4&amp;6</sup>	365,200	356	0.3	0.5	4.3	4,180,000
	Onek <sup>4&amp;6</sup>	285,100	118	0.4	1.2	8.3	1,082,000
	Birmingham <sup>4&amp;5</sup>	509,400	717	0.2	1.7	1.5	11,743,000
<b>Total Inferred</b>		<b>1,660,600</b>	<b>455</b>	<b>0.2</b>	<b>1.6</b>	<b>3.7</b>	<b>24,271,000</b>

Notes:

- All mineral resources, except the Elsa Historical Tailings Resource, are classified following the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) of NI 43-101.
- Indicated mineral resources are inclusive of mineral reserves estimates.
- Mineral resources are not all mineral reserves and do not have demonstrated economic viability. All numbers have been rounded to reflect the relative accuracy of the estimates.
- The mineral resource estimates comprising Bellekeno, Lucky Queen and Flame & Moth, Onek and Birmingham are supported by disclosure in the news release dated March 28, 2019 entitled "Alexco Announces Positive Pre-Feasibility Study for Expanded Silver Production at Keno Hill Silver District" and the technical report filed on SEDAR dated February 13, 2020 with an effective date of March 28, 2019.
- The mineral resource estimate for the Birmingham and Bellekeno deposits are based on mineral resource estimates having an effective date of March 28, 2019. The Bellekeno deposit has been depleted to reflect all mine production from the Bellekeno mine to date.
- The mineral resource estimate for the Lucky Queen, Flame & Moth and Onek deposits have an effective date of January 3, 2017.
- The mineral resource estimate for the Elsa Tailings has an effective date of April 22, 2010 and is supported by the technical report dated June 16, 2010 entitled "Mineral Resource Estimation, Elsa Tailings Project, Yukon, Canada". The Elsa Historical Tailings

Resource is classified following the CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005 of NI 43-101).

8. The disclosure regarding the summary of estimated mineral resources for Alexco's mineral properties within the Keno Hill District has been reviewed and approved by Dr. Gilles Arseneau, P.Geo (Lucy Queen, Flame & Moth, and Onek deposits), Cliff Revering, P.Eng (Birmingham deposit), and David Farrow, P.GEO.PrSciNat (Bellekeno deposit), Qualified Persons as defined by NI 43-101.

#### 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>	<i>n/a</i>	<b>1.6%</b>	<b>0.1%</b>	<b>4,310,000</b>
	- Inferred	<b>22,500</b>	<b>1,456</b>	<i>n/a</i>	<b>0.1%</b>	<i>n/a</i>	<b>1,057,000</b>

Notes:

1. 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.
2. 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.



## **Cautionary Statement Regarding Forward-Looking Statements**

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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 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 requirements for additional capital and sources and uses of funds. 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 mining activities; 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; possible variations in mineable resources, grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry; First Nation rights and title; continued capitalization and commercial viability; global economic conditions; competition; and delays in obtaining governmental approvals or financing or in the completion of development 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 are based on 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 needed for the capacity related refund under the silver purchase agreement with Wheaton will be available on reasonable terms; (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, 2019; (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 (as defined under "Description of the Business – KHSD Property"); (7) the actual nature, size and grade of its mineral resources are materially consistent with the resource estimates reported, including the PFS; (8) labor 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 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 if the property is developed. Other material factors and assumptions are discussed throughout this MD&A and, in particular, under both “Critical Accounting Estimates” 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.

### **Technical Disclosure Cautionary Note to U.S. Investors – Information Concerning Preparation of Resource Estimates**

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The material scientific and technical information in respect of Alexco's KHSD 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 the securities laws in effect in Canada, which differ from the requirements of United States securities laws. The terms “mineral reserve”, “proven mineral reserve” and “probable mineral reserve” are Canadian mining terms as defined in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum (the “**CIM**”) – *CIM Definition Standards for Mineral Resources and Mineral Reserves*, adopted by the CIM Council, as amended. These definitions differ from the definitions in the United States Securities and Exchange Commission's (“**SEC**”) Industry Guide 7 under the United States Securities Act of 1933, as amended. Under SEC Industry Guide 7, a “final” or “bankable” feasibility study is required to report reserves, the three-year historical average price is used in any reserve or cash flow analysis to designate reserves, and all necessary permits and government authorizations must be filed with the appropriate governmental authority.

In addition, the terms “mineral resource”, “measured mineral resource”, “indicated mineral resource” and “inferred mineral resource” are defined in and required to be disclosed by NI 43-101; however, these terms are not defined terms under SEC Industry Guide 7 and are normally not permitted to be used in reports and registration statements filed with the SEC. Investors are cautioned not to assume that all or any part of a mineral deposit in these categories will ever be converted into SEC Industry Guide 7 reserves. Under Canadian rules, Inferred Mineral Resources (as defined herein) can only be used in economic studies as provided under NI 43-101. Under Canadian rules, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Investors are cautioned not to assume that all or any part of an Inferred Mineral Resource exists or is economically or legally mineable. An “Inferred Mineral Resource” is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource (as defined herein) and must not be

converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration. Disclosure of “contained ounces” in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute “reserves” by SEC Industry Guide 7 standards as in place tonnage and grade without reference to unit measures.

Accordingly, information concerning mineral deposits contained in this MD&A may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

The SEC has adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC. These amendments became effective February 25, 2019 (the “SEC Modernization Rules”) and, following a two-year transition period, the SEC Modernization Rules will replace the historical property disclosure requirements for mining registrants that are included in SEC Industry Guide 7. Following the transition period, as a foreign private issuer that files its annual report of Form 40-F with the SEC pursuant to the multi-jurisdictional disclosure system, the Company is not required to provide disclosure on its mineral properties under the SEC Modernization Rules and will continue to provide disclosure under NI 43-101 and the CIM Definition Standards. If the Company ceases to be a foreign private issuer or lose its eligibility to file its annual report on Form 40-F pursuant to the multi-jurisdictional disclosure system, then the Company will be subject to the SEC Modernization Rules which differ from the requirements of NI 43-101 and the CIM Definition Standards.

#### **Additional Information**

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Additional information relating to Alexco, including Alexco’s AIF for the year ended December 31, 2019 can be found on the Corporation’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).