



Alexco Announces 22% Increase to Silver Reserves; Updated Technical Report Demonstrates Robust Economics at Keno Hill

(All amounts in CDN\$ unless otherwise indicated)

May 26, 2021 - Alexco Resource Corp. (NYSE American/TSX: AXU) ("Alexco" or the "Company") today announces the filing of an updated technical report (the "**Technical Report**") for its Keno Hill operations in Yukon, Canada ("**Keno Hill**"), expanding the Mineral Reserve by 22% to 1.44 million tonnes, grading an average 804 grams per tonne ("**g/t**") silver ("**Ag**"), 3.84% zinc ("**Zn**"), 2.64% lead ("**Pb**"), and 0.31 g/t gold ("**Au**"), or approximately 1,035 g/t silver equivalent ("**AgEq**"). The updated reserve mine plan is projected to produce over 35.5 million ounces of Ag over the next 8 years.

HIGHLIGHTS

- **Updated life of mine plan.** Average annual production from Keno Hill of 4.4 million ounces of Ag at an average all-in sustaining cost ("**AISC**"), including corporate costs and working capital, of US\$11.59/ounce ("**oz**").
- **Robust economics at consensus silver prices with significant leverage.** Life of mine after-tax free cash flows of approximately \$189.7 million using analyst consensus metal prices, which equates to approximately \$277.3 million at current Ag prices¹.
- **High grade Reserve growth of 22% for contained Ag.** Mineral Reserves increased to 1.44 million tonnes, versus the previous estimate of 1.17 million tonnes, while maintaining Keno Hill's unique high-grade Ag grades of over 800 g/t (on average).
- **Organic growth inherent in Keno Hill.** After ramping up operations through 2021, the Technical Report contemplates a mill expansion in year three of operations from approximately 400 tonnes per day ("**tpd**") to approximately 550 tpd, helping to grow payable Ag production to over 5.0 million oz in 2024.
- **Further growth ahead for Keno Hill.** The Technical Report and updated Mineral Reserve estimate are based upon all drilling completed at Keno Hill prior to 2019. Alexco plans to update the property-wide mineral resource estimate by year end 2021 and will incorporate the results from the ongoing 25,000 meter drill program focused on the infill and extension of the Bermingham Northeast Deep zone as well as the results of the successful drilling campaigns of 2019 and 2020.

Clynt Nauman, Alexco's Chairman and CEO said, "Today's updated Technical Report further demonstrates that Keno Hill is a district capable of generating significant financial returns from very high-grade Reserves over a growing mine life in a tier-one jurisdiction. Our 2021 exploration drilling program continues to advance and will form the basis for an updated mineral resource by the end of the year. We anticipate that this work will confirm our long-held thesis that production from Keno Hill should continue for many years to come, and that its best days are ahead."

1. Based upon the +20% Ag price sensitivity scenario, which approximates the current Ag price



MINERAL RESERVE ESTIMATE

The Mineral Reserves (shown below) show the total Mineral Reserves for Keno Hill; all Mineral Reserves are Probable Mineral Reserves. External dilution and mineable recovery have been applied to the Mineral Reserves. Please note that rounding of tonnes, average grades, and contained metal may result in apparent discrepancies with rounded totals.

Mineral Reserves

Deposit	Category	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Au (g/t)	Contained Metal (000 oz Ag)	Contained Metal (000 oz Au)	Contained Metal (M lbs Pb)	Contained Metal (M lbs Zn)
Bellekeno	Proven	-	-	-	-	-	-	-	-	-
	Probable	12,809	936	13.00	7.30	0.00	385	0	4	2
Bellekeno Surface Stockpile	Proven	-	-	-	-	-	-	-	-	-
	Probable	3,397	1150	21.70	4.50	0.00	126	0	2	0
Lucky Queen	Proven	-	-	-	-	-	-	-	-	-
	Probable	70,648	1269	2.71	1.56	0.13	2883	0	4	2
Flame and Moth	Proven	-	-	-	-	-	-	-	-	-
	Probable	721,322	672	2.69	6.21	0.49	15,590	11	43	99
Birmingham	Proven	-	-	-	-	-	-	-	-	-
	Probable	630,173	899	2.26	1.30	0.13	18,209	3	31	18
Total	Proven	-	-	-	-	-	-	-	-	-
	Probable	1,438,349	804	2.64	3.84	0.31	37,193	14	84	122

Notes:

1. Mineral Reserves are reported herein based on an NSR cutoff value using estimated metallurgical recoveries, assumed metal prices and smelter terms, which include payable factors, treatment charges, penalties, and refining charges.
2. Tonnage and grade measurements are in metric units. Contained gold and silver ounces are reported as troy ounces.
3. The Bellekeno, Lucky Queen, Flame & Moth and Birmingham deposits are incorporated into the current mine plan supported by disclosure in the news release dated May 26, 2021 entitled "Alexco Announces 22% Increase to Silver Reserves; Updated Technical Report Demonstrates Robust Economics at Keno Hill".
4. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.



LIFE OF MINE PLAN

	TOTAL	2021	2022	2023	2024	2025	2026	2027	2028	2029
MILL TONNES	1,438,349	62,057	137,120	166,380	199,980	199,980	199,980	199,980	199,980	72,892
Calculated Average Grade										
Ag (g/t)	804	947	1077	909	863	721	777	678	730	623
Au (g/t)	0.31	0.16	0.29	0.27	0.34	0.33	0.32	0.31	0.33	0.28
Pb (%)	2.64%	5.93%	2.93%	2.92%	3.41%	2.55%	2.23%	2.08%	1.93%	1.41%
Zn (%)	3.84%	4.85%	4.63%	3.24%	2.85%	3.52%	3.35%	3.46%	5.02%	5.52%
Payable Metal Production										
Ag (Oz)	33,510,354	1,686,763	4,308,807	4,398,913	5,018,716	4,168,804	4,501,660	3,914,647	4,209,621	1,302,423
Au (Oz)	5,082	81	419	450	691	779	787	758	844	273
Pb (lbs)	69.8	6.8	7.4	9.0	12.8	9.4	8.1	7.5	7.0	1.8
Zn (lbs)	75.8	4.2	8.9	7.2	7.6	9.6	9.1	9.4	14.2	5.7

NATIONAL INSTRUMENT 43-101

The Technical Report, titled “NI 43-101 Technical Report on Updated Mineral Resource and Reserve Estimate of the Keno Hill Silver District” with an effective date of April 1, 2021 and dated May 26, 2021 has been filed on SEDAR.

Readers are cautioned that the conclusions, projections, and estimates set out in this news release are subject to important qualifications, assumptions, and exclusions, all of which are detailed in the Technical Report. To fully understand the summary information set out above, the Technical Report filed on SEDAR at www.sedar.com should be read in its entirety.

Qualified Persons

The Technical Report was compiled by Mining Plus with contributions from a team of Qualified Persons as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) as follows:

- Zach Allwright, P.Eng. of Mining Plus
- Gilles Arseneau, Ph.D., P.Geo. of SRK Canada Inc.
- Hassan Ghaffari, P.Eng of Tetra Tech
- Paul Hughes, Ph.D., P.Eng. of Mining Plus
- Cliff Revering, P.Eng., of SRK Canada Inc.
- Kourosh Tarighi, M.Sc, P.Eng. of Mining Plus

All Mineral Resources and Mineral Reserves 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 NI 43-101.

See “Cautionary Note to Investors regarding Mineral Resource and Mineral Reserve Estimates” below.



The technical information in this news release regarding the Technical Report and the contents thereof was reviewed by Zach Allwright, P.Eng., Paul Hughes Ph.D., P.Eng. and Kourosh Tarighi, M.Sc., P.Eng. each of Mining Plus, Gilles Arseneau, Ph.D., P.Geo. and Cliff Revering, P.Eng, both of SRK Canada Inc. and Hassan Ghaffari, P.Eng. of Tetra Tech, each of whom is a Qualified Person and has approved the disclosure herein.

About Alexco

Alexco is a Canadian primary silver company that owns and operates the majority of the historic Keno Hill Silver District, in Canada's Yukon Territory, one of the highest-grade silver deposits in the world. Alexco is currently advancing Keno Hill to production and started concentrate production and shipments in Q1 2021. Keno Hill is expected to produce an average of approximately 4.4 million ounces of silver per year contained in high quality lead/silver and zinc concentrates. Keno Hill retains significant potential to grow and Alexco has a long history of expanding the operation's mineral resources through successful exploration.

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Forward-Looking Statements

Some statements ("forward-looking statements") in this news release contain forward-looking information concerning the results of the Technical Report, anticipated results and developments in Alexco's operations in future periods, planned exploration and development of its properties, plans related to Alexco's business and other matters that may occur in the future, made as of the date of this news release. Forward-looking statements may include, but are not limited to, statements with respect to results of the Technical Report; future mineral exploration including the estimation of Mineral Reserves and Mineral Resources and the realization of Mineral Reserve and Mineral Resource estimates and anticipated timing regarding results from the ongoing drill program and updated mineral resource estimate; future mine construction and development activities; future mine operation and production; the timing of activities and reports; the amount of estimated development and operational expenses; projected operational and economic metrics; the success of exploration and development activities; the potential upside and growth in respect of certain deposits comprising the Keno Hill Project; anticipated permitting time lines; requirements for additional permits (or amendments to existing permits); anticipated installation of certain infrastructure; projected equipment and production capacity; plans regarding the Company's 2021 drilling program; and potential capital, revenue and sources and uses of funds. 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, among others, risks related to risks and uncertainties relating to the COVID-19 pandemic including but not limited to business closures, travel restrictions, quarantines and a general reduction in consumer activity; actual results and timing of exploration and development, mining, environmental services and remediation and reclamation activities; future prices of silver, gold, lead, zinc and other commodities; possible variations in mineral 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. 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 news release, Alexco has applied several material assumptions, including, but not limited to the circumstances surrounding the COVID-19 pandemic, although evolving, will stabilize or at least not worsen; that the extent to which COVID-19 may impact the Company, including without limitation disruptions to the mobility of Company personnel, costs associated with implementation of health and safety protocols, increased labour and transportation costs, and other related impacts, will not change in a materially adverse manner; Alexco will be able to raise additional capital as necessary, that the assumptions, projections, and estimates in the Technical Report will proceed as planned, and that market fundamentals will result in sustained silver, gold, lead and zinc demand and prices. There can be no assurance that forward-looking statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Alexco expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as otherwise required by applicable securities legislation.



Cautionary Note to Investors regarding Mineral Resource and Reserve Estimates

This press release has been prepared in accordance with the requirements of Canadian provincial securities laws, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all mineral reserve and mineral resource estimates included have been prepared in accordance with Canadian National Instrument 43-101— Standards of Disclosure for Mineral Projects (“NI 43-101”) and the Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) – CIM Definition Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as amended. NI 43-101 is an instrument developed by the Canadian securities administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These definitions differ from the definitions in requirements under United States securities laws adopted by the United States Securities and Exchange Commission (the “SEC”).

Under Canadian rules, estimates of Inferred Mineral Resources (as defined therein) 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.

Investors are cautioned not to assume that all or any part of Mineral Reserves and Mineral Resources determined in accordance with NI 43-101 and CIM standards will qualify as, or be identical to, mineral reserves and mineral resources estimated under the standards of the SEC applicable to U.S. companies. 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. As a foreign private issuer that files its annual report on Form 40-F with the SEC pursuant to the multi-jurisdictional disclosure system, the Corporation is not required to provide disclosure on its mineral properties under the SEC’s new rules and will continue to provide disclosure under NI 43-101 and the CIM standards. If the Corporation 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 Corporation will be subject to the SEC’s new rules, which differ from the requirements of NI 43-101 and the CIM standards.

Accordingly, information contained in this press release that contain descriptions of the Corporation’s mineral deposits 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.

Alternative Performance Measures

Alternative performance measures are furnished to provide additional information. These non-GAAP performance measures are included in this news release because these statistics are key performance measures that management uses to monitor performance, to assess how the Company is performing, and to plan and assess the overall effectiveness and efficiency of mining operations. These performance measures do not have a standard meaning within IFRS and, therefore, amounts presented may not be comparable to similar data presented by other mining companies. These performance measures should not be considered in isolation or as a substitute for measure of performance in accordance with IFRS. The Company has included certain alternative performance measures including “All-in Sustaining Cost” (AISC) per ounce of silver in this press release. All-in sustaining cost per silver ounce is calculated with reference to World Gold Council guidance, and is based upon contained silver ounces produced, excludes impacts of the streaming agreement with Wheaton Precious Metals, and included general and administrative, exploration, other expenses and sustaining capital expenditures.