



News Release

Alexco Updates Bermingham Mineral Resource

September 20, 2018 - Alexco Resource Corp. (NYSE American: AXU) (TSX:AXR) (“Alexco” or the “Company”) today reports an updated and expanded mineral resource estimate for the Bermingham deposit, located within the Keno Hill Silver District (“KHSD”) in Canada’s Yukon Territory.

Summary

As a result of exploration work conducted in 2017 and 2018, the Bermingham indicated mineral resources have expanded from 17.3 million (“M”) ounces to 33.3 M ounces of contained silver at an average silver grade of 628 grams per tonne (“g/t”), while inferred mineral resources have increased from 5.5 M ounces to 10.4 M ounces of contained silver at an average silver grade of 526 g/t. The updated mineral resource estimate was prepared by SRK Consulting (Canada) Inc. (“SRK”) and a comparison to the prior mineral resource estimate is outlined below:

Bermingham Mineral Resource Estimate – September 17, 2018 Compared to January 3, 2017				
		Resource Estimates		
Category		September 17, 2018	January 3, 2017	Change (%)
Indicated Tonnes	(t)	1,651,500	858,000	+ 93%
Indicated Silver Grade	(g/t)	628 g/t	628 g/t	-
Total Indicated Silver	(ounces)	33,350,300	17,324,000	+ 93%
Inferred Tonnes	(t)	616,550	220,000	+ 180%
Inferred Silver Grade	(g/t)	526 g/t	770 g/t	- 32%
Total Inferred Silver	(ounces)	10,438,700 ounces	5,446,000 ounces	+ 92%

With the addition to the silver mineral resource at Bermingham, Alexco’s district-wide indicated mineral resources at Keno Hill increased by approximately 24% from 67.9 M ounces to 84.0 M ounces of contained silver. Similarly, district-wide inferred mineral resources increased by 28% to 23.0 M ounces of contained silver.

Background

The Bermingham deposit comprises a closely spaced series of subparallel steeply southeast dipping vein sets – identified (hangingwall to footwall) as the Bermingham, Bermingham Footwall and Bear veins that can be traced over a northeasterly strike distance exceeding 850 meters (“m”) in four zones identified (from southwest to northeast) as the Etta, Arctic, Bear and Northeast Zones that are separated by post-mineral faults. In addition, a small resource is contained in a conjugate set of related West Dipping veins. Recent detailed



underground and surface drilling work has focused on the Arctic and Bear Zones where the vein sets are connected either laterally or vertically within the wider Birmingham vein-fault structural corridor. Mineralization extends from between 90 m to 160 m below surface to a depth of approximately 450 m where veining remains open.

A detailed mineral resource estimate by vein and zone was prepared by SRK and is summarized below:

Mineral Resource Category		Volume (m3)	Tonnes	Total Ag (oz)	Total Au (oz)	Total Pb (lbs)	Total Zn (lbs)	Average Grade Ag (g/t)	Average Grade Au (g/t)	Average Grade Pb (%)	Average Grade Zn (%)
INDICATED											
Arctic	Bear	19,000	54,750	592,400	100	800,500	559,700	336	0.05	0.7	0.5
	Birmingham Main	142,600	428,400	7,656,300	1,500	9,484,400	13,045,700	556	0.11	1	1.4
	Footwall	87,500	277,700	6,046,100	1,200	11,543,900	7,210,600	677	0.14	1.9	1.2
	West Dipper	8,000	24,600	666,600	90	769,800	653,800	843	0.11	1.4	1.2
Bear	Bear	59,100	189,450	8,442,200	1,130	15,665,400	5,352,350	1,386	0.18	3.8	1.3
	Birmingham Main	22,500	70,200	1,186,500	280	1,206,400	1,888,400	525	0.12	0.8	1.2
	Footwall	71,700	217,400	3,835,800	900	6,136,300	5,884,300	549	0.13	1.3	1.2
Etta	Birmingham Main	43,000	133,600	2,065,800	300	6,054,700	5,143,000	481	0.07	2.1	1.7
	Footwall	57,100	168,600	1,713,700	350	4,508,800	6,588,300	316	0.06	1.2	1.8
North East	Bear	9,900	29,700	601,000	120	947,550	1,666,750	629	0.12	1.4	2.5
	Birmingham Main	19,850	57,100	543,900	150	773,650	697,300	297	0.08	0.6	0.6
TOTAL INDICATED		540,250	1,651,500	33,350,300	6,120	57,891,400	48,690,200	628	0.12	1.6	1.3
INFERRED											
Arctic	Bear	19,800	59,000	676,450	130	1,413,750	805,900	357	0.07	1.1	0.6
	Birmingham Main	20,360	62,000	1,117,200	300	1,012,900	2,267,800	560	0.15	0.7	1.7
	Footwall	60,400	190,900	2,827,400	800	4,240,300	1,324,200	461	0.13	1	0.3
	West Dipper	800	2,350	33,250	5	26,900	22,800	441	0.07	0.5	0.4
Bear	Bear	38,050	120,900	3,167,000	500	4,179,950	1,582,200	815	0.13	1.6	0.6
	Birmingham Main	950	3,000	19,100	5	15,600	107,600	197	0.06	0.2	1.6
	Footwall	7,100	22,100	195,850	75	484,850	254,550	276	0.11	1	0.5
Etta	Birmingham Main	290	850	6,100	0	7,400	15,700	221	0.05	0.4	0.8
	Footwall	27,100	78,000	686,900	175	792,850	2,741,100	274	0.07	0.5	1.6
North East	Bear	23,750	72,350	1,673,750	300	2,178,350	2,428,200	720	0.13	1.4	1.5
	Birmingham Main	1,800	5,100	35,700	10	61,050	67,950	217	0.07	0.5	0.6
TOTAL INFERRED		200,400	616,550	10,438,700	2,300	14,413,900	11,618,000	526	0.12	1.1	0.9

Notes:

1. The effective date of this mineral resource estimate is September 17, 2018.
2. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All numbers have been rounded to reflect the relative accuracy of the estimates.
3. Reported at a contained metal value cut-off grade of CAD \$185.00/t (US\$0.80=C\$1) using consensus long term metal prices (US\$) and recoveries (Ag US\$20.80/oz, recovery 96%; Pb US\$1.10/lb, recovery 97%; Zn US\$1.20/lb, recovery 88%; Au US\$1,450/oz, recovery 72%).
4. Ag grades capped at 4,200 g/t; Zn capped at 6.5%; Pb capped at 6.0% for the Birmingham vein.
5. Ag grades capped at 13,000 g/t, Zn capped at 12% and Pb capped at 33% for the Bear vein.
6. Ag grades capped at 3,500 g/t, Zn capped at 8.5% and Pb capped at 13% for the Birmingham Footwall vein.
7. Ag grades capped at 3,600 g/t, Zn capped at 5.0% and Pb capped at 7.5% for the West Dipper vein.
8. Table numbers may not add up due to rounding.



Alexco Chairman and Chief Executive Officer Clynt Nauman said, “The majority of the tonnage in the Bermingham deposit resides in the Arctic and Bear Zones where approximately 28 million of the 33 million indicated ounces of silver are located at an average grade of approximately 700 g/t silver. Looked at in total, the Bermingham deposit is now emerging as a one of the larger discoveries in the Keno Hill district, characterized by more than 1.6 million tonnes of indicated mineralization with an average silver grade approximately 25% higher than our Flame & Moth deposit. This new resource will be taken into consideration during the pre-feasibility mine planning work scheduled for completion in October, 2018. Both the completed resource update and the pre-feasibility study represent the next steps in moving the Keno Hill District back toward production.”

Bermingham Deposit

Alexco has conducted surface diamond drilling programs at Bermingham between 2009 and 2018 and underground drilling from the exploration decline in 2018. The database at Bermingham currently includes 203 drill holes for a total of 62,541 m of HQ core. The resource estimation presented here incorporates the results from 405 vein intervals from 151 holes compared with those from 93 holes that were used in the January 2017 estimation.

Recent drilling has focused on obtaining reduced resource definition intercept spacings, particularly on the upper part of the high grade Bear vein that overall ranges in true width up to 6.4 m at 182 ounce per tonne (“oz/t”) silver (K-14-0537) and in grade up to 240 oz/t silver over 5.0 m true width (K-15-0580). This mineralization has been traced over a down-plunge extent of 300 m (over a vertical range of 230 m) with a plunge width of up to approximately 130 m, and the top of the deposit in this vicinity being approximately 130 m below surface. In addition, the recent drilling has increased coverage of the Bermingham and Bermingham Footwall veins where a significant amount of the new resource has been defined.

Interpretation of the consolidated drilling results has confirmed the presence of the three mineralized veins that splay and change orientation along strike within the north-northeast striking and moderately to steeply southeast dipping Bermingham vein-fault structural corridor. This structural corridor is primarily divided into the Etta Zone that lies in the hangingwall of the post-mineral Mastiff Fault exposed at the western end of the historic Bermingham open pit and the extended Arctic Zone in its footwall below the open pit. The main through-going Bermingham and Bermingham Footwall veins occur in both the Etta and the extended Arctic zones, while the Bear vein and associated West Dipper vein set occur only within the extended Arctic Zone at positions controlled by a flexure in the Bermingham vein-fault.

The Bermingham deposit veins typically occur in structurally complex zones as discrete veins 0.5 m to more than 5 m wide with a five to ten meter wide structurally damaged vein margin. The discrete veins exhibit heavily-disseminated to massive mineralization while mineralization in the vein margins is commonly more stringer-like. The higher grade Bermingham mineralization is generally characterized by the presence of a complex silver bearing mineral assemblage including pyrrargyrite (ruby silver), freibergite, argentiferous galena, stephanite, polybasite and wire silver in a dominantly sideritic gangue.

Metallurgical test work has demonstrated that silver and lead recoveries from Bermingham are expected to be in the range of 94% to 96%, while producing a lead concentrate grading 55% to 60% lead and up to 30,000 g/t



silver. Zinc recovery is predicted to be in the range of 70% to 75% to a zinc concentrate grading in excess of 50% zinc.

The Birmingham mineral resource was estimated using 3-D Maptek Vulcan block modeling software in multiple passes in nine by three by six meter blocks by ordinary kriging. Grade estimates were based on capped one meter composited assay data. Capping levels were set to 4,200 g/t for silver for the Birmingham vein, 13,000 g/t for the Bear vein, 3,500 g/t for the Birmingham Footwall vein and 3,600 g/t for the West Dipper vein; lead was capped at 6.0% for the Birmingham vein, 33.0% for the Bear vein, 13.0% for the Birmingham Footwall vein and 7.5 for the West Dipper vein; and zinc was capped at 6.5% for the Birmingham vein, 12.0% for the Bear vein, 8.5% for the Birmingham Footwall vein and 5.0% for the West Dipper vein. Blocks were classified as indicated mineral resources provided the blocks were estimated within the first pass search ellipse using multiple drill holes and a minimum of 5 composites. All other interpolated blocks were classified as inferred mineral resources.

A summary of all of Alexco's KHSD mineral resources incorporating the updated mineral resource estimates for Birmingham are appended to this release, and are available for review on the Company's website at www.alexcoresource.com.

Qualified Persons

SRK prepared the updated mineral resource estimate for the Birmingham deposit, and is independent of Alexco for purposes of National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101"). The Birmingham mineral resource estimate was completed by Cliff Revering, P.Eng., Principal Consultant (Geological Engineering) with SRK. Mr. Revering is a Qualified Persons as defined by NI 43-101 and has reviewed, verified and approved the contents of this news release relating to the mineral resource estimate for the Birmingham deposit. 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 guidelines.

The metallurgical testing information in this news release has been reviewed and verified by Jeffrey B. Austin P. Eng., President of International Metallurgical and Environmental Inc. and a Qualified Person as defined by NI 43-101.

The disclosure of all other scientific and technical information in this news release regarding projects on Alexco's mineral properties has been reviewed and approved by Alan McOnie, FAusIMM, Alexco's Vice President, Exploration and a Qualified Person as defined by NI 43-101.

The drill data and sampling protocols have been reviewed, verified and compiled by Alexco's geologic staff since 2011 under the supervision of Alan McOnie, Vice President, Exploration for Alexco and a Qualified Person as defined by National Instrument 43-101. A rigorous quality control and quality assurance protocol is used on the project, including blank, duplicate and standard reference samples in each batch of 20 samples delivered to the assay lab. Drill core samples included in the updated resource estimation were direct shipped to ALS Minerals Labs at Whitehorse, Yukon Territory for preparation, with fire assay, multi-element ICP analyses and ore grade over limits completed at the ALS Minerals facility in North Vancouver, British Columbia.



About Alexco

Alexco owns the majority of the historic high-grade Keno Hill Silver District in Canada's Yukon Territory as detailed in its preliminary economic assessment (the "PEA") entitled "Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada", which is dated March 29, 2017, with an effective date of January 3, 2017, and anticipates the sequential development of four high grade silver deposits over an eight year mine life producing more than one million tonnes with an average grade of 843 grams per tonne silver, 3.3% lead and 4.6% zinc. Silver production is anticipated to be approximately 3.5 million ounces per year. The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Alexco also operates a wholly-owned subsidiary business, Alexco Environmental Group, that provides mine-related environmental services, remediation technologies and reclamation and mine closure services to both government and industry clients in North America and elsewhere.

Contact

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Some statements ("forward-looking statements") in this news release contain forward-looking information concerning Alexco's anticipated results and developments in Alexco's operations in future periods, planned exploration and development of its properties, plans related to its 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 the 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, the preparation and anticipated timing for completion of a pre-feasibility study, future mine construction and development activities, future mine operation and production, the timing of activities and reports, the amount of estimated revenues and expenses, the success of exploration activities, permitting time lines, requirements for additional capital 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 actual results and timing of exploration and development activities; actual results and timing of mining activities; actual results and timing of environmental services activities; 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. 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 assumption that Alexco will be able to raise additional capital as necessary, that the proposed exploration and development and timing for completion of a pre-feasibility study 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.



APPENDIX I - Summary of Mineral Resources

Summary of Resources

The following table sets forth the estimated mineral resources for Alexco's mineral properties within the Keno Hill Silver District:

Category ^{1,2,9}	Property	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Contained Ag (oz)
Indicated	Bellekeno Deposit ^{3&4}	262,000	585	<i>n/a</i>	3.5%	5.3%	4,927,000
	Lucky Queen Deposit ^{3&5}	132,300	1,167	0.2	2.4%	1.6%	4,964,000
	Flame & Moth Deposit ^{3&5}	1,679,000	498	0.4	1.9%	5.3%	26,883,000
	Onek ^{3&5}	700,200	191	0.6	1.2%	11.9%	4,300,000
	Birmingham ^{3&6}	1,651,500	628	0.1	1.6%	1.3%	33,350,300
	Total Indicated – Sub-Surface	4,425,000	523	0.3	1.8%	4.7%	74,424,300
	Elsa Tailings ⁷	2,490,000	119	0.1	1.0%	0.7%	9,527,000
	Total Indicated – All Deposits	6,915,000	378	0.2	1.5%	3.3%	83,952,300
Inferred	Bellekeno Deposit ^{3&4}	243,000	428	<i>n/a</i>	4.1%	5.1%	3,344,000
	Lucky Queen Deposit ^{3&5}	257,900	473	0.1	1.0%	0.8%	3,922,000
	Flame & Moth Deposit ^{3&5}	365,200	356	0.3	0.5%	4.3%	4,180,000
	Onek ^{3&5}	285,100	118	0.4	1.2%	8.3%	1,082,000
	Birmingham ^{3&6}	616,550	526	0.1	1.1%	0.9%	10,438,700
	Total Inferred	1,767,750	404	0.2	1.4%	3.4%	22,966,700
Historical Resources	Silver King ⁸						
	- Proven, probable and indicated	99,000	1,354	<i>n/a</i>	1.6%	0.1%	4,310,000
	- Inferred	22,500	1,456	<i>n/a</i>	0.1%	<i>n/a</i>	1,057,000

Notes:

- 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 the guidelines of NI 43-101.
- Mineral resources are not mineral reserves and do not have demonstrated economic viability. All numbers have been rounded to reflect the relative accuracy of the estimates.
- The Keno Hill Silver District is comprised of five deposits: Bellekeno, Lucky Queen and Flame & Moth, Onek and Birmingham, of which Bellekeno, Lucky Queen, Flame & Moth and Birmingham are incorporated into the current mine plan outlined in the technical report filed on SEDAR dated March 29, 2017, entitled "Preliminary Economic Assessment of the Keno Hill Silver District Project, Yukon, Canada". The mineral resource estimates for the project are supported by disclosure in the news release dated March 29, 2017 entitled "Alexco and Silver Wheaton Amend Silver Purchase Agreement and Alexco Announces Positive Preliminary Economic Assessment for Expanded Silver Production at Keno Hill". The mineral resource estimate for Birmingham has been updated by disclosure in note 6 below.
- The resource estimates for the Bellekeno deposit are based on a geologic resource estimate having an effective date of September 30, 2012. The Bellekeno indicated mineral resources are as at September 30, 2013, and reflect the geologic resource less estimated subsequent depletion from mine production.
- The resource estimates for the Lucky Queen, Flame & Moth, Onek and Birmingham deposits have an effective date of January 3, 2017.
- The resource estimates for the Birmingham deposit has an effective date of September 17, 2018 and is supported by disclosure in the news release dated September 20, 2018 entitled "Alexco Updates Birmingham Mineral Resource".
- The 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".
- Historical resources for Silver King are supported by disclosure in the news release dated March 29, 2017 entitled "Alexco and Silver Wheaton Amend Silver Purchase Agreement and Alexco Announces Positive Preliminary Economic Assessment for Expanded Silver Production at Keno Hill".
- The disclosure regarding the summary of estimated 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.