



## News Release

### **ALEXCO 2018 RECONNAISSANCE DRILLING CONFIRMS CONTINUATION OF BIRMINGHAM MINERALIZATION AT DEPTH AND IDENTIFIES AN OFFSET EXTENSION, IDENTIFIES NEW GOLD TARGETS**

**January 21, 2019 - Alexco Resource Corp. (NYSE American: AXU) (TSX: AXR)** (“Alexco” or the “Company”) today released the remaining results from its 2018 7,687 meter (“m”) surface reconnaissance and deep drilling program comprising 26 drill holes on six targets scattered across the Keno Hill Silver District in Canada’s Yukon Territory. The targets were mostly blind, and were selected to determine if the ore control model developed for the Birmingham deposit is duplicated in other areas across the district. In addition, two of the targets were significant step outs – along strike and down dip – from the recently defined Birmingham silver deposit. The results from four surface in-fill holes comprising 1,052 m at the Birmingham NE Zone are also included herein.

#### **Highlights**

##### *Birmingham NE and Birmingham deep/down dip*

- **K-18-0711** intersected the Bear Vein in the Northeast Zone grading 1,453 grams per tonne (“g/t”) (46.70 ounces per tonne (“oz/t”)) silver (“Ag”) over a true width of 2.0 m from 353.0 m including 4,470 g/t (143.71 oz/t) Ag over a true width of 0.60 m. The Birmingham Main Vein grading 418 g/t (13.43 oz/t) Ag over a true width of 2.82 m from 307.25 m was also intersected in this hole.
- **K-18-0706** drilled approximately 200 m down plunge from K-18-0711, intersected a 60 m wide altered and mineralized structural zone from 460 m, containing 1,675 g/t (53.85 oz/t) Ag over a true width of 0.33 m from 467.07 m and 309 g/t (9.93 oz/t) Ag over a true width of 1.01 m from 524.31 m.

##### *Brefalt*

- **K-18-0730** drilled approximately 2 kilometers west of the Birmingham deposit, intersected the inferred continuation of the Birmingham structure returning 234 g/t (7.52 oz/t) Ag over a true width of 1.87 m from 624.32 m including 1,745 g/t (56.10 oz/t) Ag over a true width of 0.23 m and separately 94 g/t (3.03 oz/t) Ag over a true width of 3.80 m from 680.32 m.

##### *No Cash*

- **K-18-0718** intersected 76.3 g/t gold (“Au”) and 105 g/t (3.37 oz/t) Ag over a true width of 1.51 m from 270 m.
- **K-18-0714** intersected 5.36 g/t Au and 24 g/t (0.77 oz/t) Ag over a true width of 0.70 m from 216.55 m.

Alexco’s Chairman and Chief Executive Officer Clynt Nauman commented, “Our late season reconnaissance drilling program answered a number of long standing questions, most importantly confirming the presence of the

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Birmingham deposit structural framework down plunge of the existing deposit (“Birmingham deep”) and the inferred presence of the Birmingham structure more than two kilometers to the west on the heavily covered slopes southwest of the post-mineral Brefalt Fault. Elsewhere from this program, it is clear that the Birmingham/Hector-Calumet style geological architecture can be interpreted at various intervals and elevations along several district scale structures. In 2019 we will launch a further surface drilling program to follow up on our 2018 results, most importantly focusing on the “Birmingham deep” area where our first drill hole K-18-0706 identified a 60 m wide structural zone containing multiple mineralized intervals including 1,675 g/t Ag over a true width of 0.33 m.”

### **Geology and Drilling Detail**

The 2018 exploration program that was completed included:

- 15,314 m of surface drilling in 55 holes including 7,687 m in 26 drill holes in the reconnaissance program, and 3,756 m in 11 holes in the Birmingham in-fill drilling program, as well as 1,179 m in ten holes at Flame & Moth for metallurgical and geotechnical purposes and 2,692 m on third party properties within the district complex.
- 4,230 m of underground drilling at Birmingham.

Drilling at the Birmingham NE Zone has resulted in expansion of the Birmingham deposit into a broad area that remains untested along strike and at depth. Resource extension drilling will continue in this area in 2019 with the aim of further expanding the current Birmingham resource which currently comprises 33.3 million ounces of contained indicated silver at an average grade of 628 g/t and inferred mineral resources of 10.4 million ounces at an average grade of 526 g/t silver (see news release dated September 20, 2018, entitled “Alexco Updates Birmingham Resource”).

Work completed approximately two kilometers to the west of the Birmingham deposit focussed on finding the inferred fault offset of the mineralized Hector-Calumet and Birmingham structures across the northwest trending post-mineral Brefalt Fault. This fault is interpreted to offset a number of other mineralized systems by up to approximately 1,000 m, including two that have historically produced 148 million ounces of silver. The mineralized offset portion of the major Hector-Calumet / Birmingham vein system is inferred to have now been identified in drill hole K-18-0730 on the southwest side of the Brefalt Fault, thus indicating an unexplored southwest extension of this major mineralized system. The presence of up to 76.3 g/t gold over a true width of 1.5 m in drill hole K-18-0718 and 5.36 g/t gold over a true width of 0.7 m in drill hole K-18-0714 represent a new discovery of gold in the historical No Cash area, approximately one kilometer north of Birmingham. Further work is required to understand the significance of this discovery.

### **Corporate Update**

#### *H.H. ‘Spud’ Huestis Award*

The Association for Mineral Exploration (“AME”) announced on December 6<sup>th</sup>, 2018 the recipients of their 2018 Celebration of Excellence Award winners. Alexco’s own Al McOnie (VP, Exploration), Seymour Iles (District Exploration Manager) and Jared Chipman (Sr. Geologist) are being honored with the H.H. ‘Spud’ Huestis Award for Excellence in Prospecting and Mineral Exploration. This award is a result of their work on the recent discovery and delineation of more than 60 million ounces of silver in the Flame & Moth and Birmingham deposits in the Keno Hill Silver District.

CEO Nauman stated, “We are extremely proud of the work that Al, Seymour, Jared and the entire geological team at Alexco have performed with respect to the Flame & Moth and Birmingham discoveries. This award is a prestigious honor as, not only does it recognize their outstanding work, it validates one of Alexco’s founding principles which is the systematic application of sound and basic exploration practices.”



### *Airborne Magnetic and Resistivity Geological Survey*

A detailed airborne magnetic and resistivity geophysical survey was completed over Galena Hill in 2018. The survey results will allow for generation of a greatly refined model of the geological framework of Galena Hill and assist in continued district exploration.

### *Prefeasibility Study*

Completion of mine planning, mine scheduling and metallurgical work related to the updated production plan is proceeding on schedule with results anticipated to be available in late February or early March.

### **Notes**

The 2018 exploration drill program and sampling protocol has been reviewed, verified and compiled by Alexco's geologic staff under the supervision of Alan McOnie, Vice President, Exploration for Alexco and a Qualified Person as defined by National Instrument 43-101 ("NI 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 were direct shipped to ALS Minerals Lab at Whitehorse, Yukon for preparation, and to the ALS Minerals facility in North Vancouver, British Columbia for fire assay, multi-element ICP and overlimit analyses.

The disclosure of all other scientific and technical information contained in this news release regarding projects on Alexco's mineral properties have been reviewed and approved by Mr. Alan McOnie, FAusIMM, Alexco's Vice President, Exploration, who is a Qualified Person as defined by NI 43-101 – *Standards of Disclosure for Mineral Projects*.

### **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 g/t 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.

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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, 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 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.*



APPENDICES

Table 1 - Drill Hole Details

Prospect	Hole	Easting (m)	Northing (m)	Elevation (m)	Collar Azimuth	Collar Inclination	Length (m)	Date Completed
Birmingham	K-18-0683**	479096.09	7086618.39	1356.91	294.0	-51.0	255.00	5/25/2018
	K-18-0706	479564.65	7086891.69	1365.02	295.0	-70.0	611.00	9/5/2018
	K-18-0707**	479479.02	7087023.62	1346.99	290.0	-56.0	12.97	8/17/2018
	K-18-0708	479478.46	7087023.82	1346.92	290.0	-55.5	389.00	8/25/2018
	K-18-0711	479478.24	7087023.50	1347.04	280.0	-55.0	395.00	9/2/2018
							1,662.97	
Black Cap	K-18-0709	486716.52	7090383.47	1342.50	80.0	-49.0	176.00	8/24/2018
	K-18-0710	487092.36	7090699.45	1472.90	257.0	-45.0	374.75	9/5/2018
	K-18-0713	487022.74	7090733.03	1468.21	300.0	-45.0	236.00	9/10/2018
	K-18-0717	487022.44	7090733.18	1468.30	300.0	-55.0	239.00	9/15/2018
	K-18-0719	486795.40	7090574.44	1385.22	45.0	-70.0	191.00	9/18/2018
							1,216.75	
Brefalt	K-18-0721	476535.91	7086383.50	1041.97	305.0	-70.0	293.00	9/22/2018
	K-18-0723	476534.92	7086379.53	1042.06	270.0	-70.0	386.00	9/27/2018
	K-18-0725	476463.65	7086443.99	1023.61	305.0	-70.0	213.00	9/29/2018
	K-18-0728	476463.75	7086444.06	1023.72	265.0	-50.0	311.50	10/4/2018
	K-18-0730	476939.46	7086118.86	1126.28	252.0	-58.0	698.00	10/19/2018
							1,901.50	
Eagle	K-18-0690	481205.58	7086961.72	1365.22	315.0	-55.0	385.00	6/16/2018
	K-18-0693	481176.34	7087033.90	1368.90	315.0	-52.0	286.00	6/21/2018
	K-18-0698	482537.76	7087277.93	1116.11	10.0	-54.0	298.00	7/12/2018
	K-18-0700	482541.45	7087278.20	1115.86	40.0	-64.0	384.00	7/20/2018
							1,353.00	
Husky	K-18-0720	474630.52	7086812.17	774.88	320.0	-70.0	366.70	9/25/2018
	K-18-0724**	474630.40	7086812.23	774.83	320.0	-48.0	56.00	9/27/2018
	K-18-0726**	474630.49	7086813.14	774.80	290.0	-60.0	18.00	9/28/2018
	K-18-0727**	474632.00	7086813.20	774.71	290.0	-65.0	32.00	9/30/2018
							472.70	



No Cash	K-18-0714	478502.15	7087685.79	1158.24	329.0	-53.0	314.00	9/14/2018
	K-18-0718	478502.20	7087685.66	1158.16	316.0	-65.0	381.35	9/21/2018
	K-18-0722	478501.60	7087685.31	1158.09	295.0	-70.0	398.00	9/28/2018
	K-18-0729	478501.61	7087685.50	1158.10	295.0	-63.0	307.00	10/6/2018
							1,400.35	

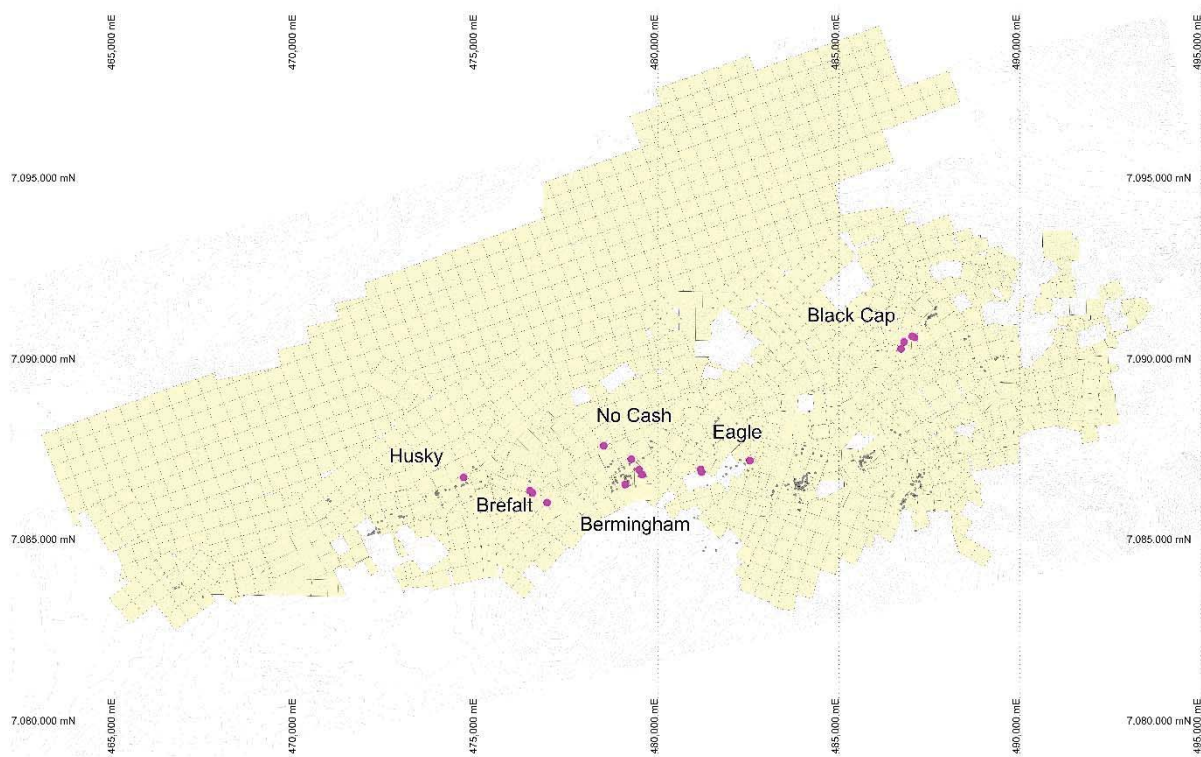
Townsite	K-18-0712	479260.09	7087314.70	1288.31	290.0	-55.0	179.00	9/6/2018
	K-18-0715	479261.17	7087314.33	1288.24	290.0	-80.0	164.00	9/9/2018
	K-18-0716	479267.06	7087317.74	1288.36	75.0	-75.0	389.00	9/16/2018
							732.00	

Total	8,739.27
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\*\* Hole Abandoned



Figure 1 – Drill Hole Locations







**Table 2 - Assay Composites**

Calculated at 30 g/t Ag cut-off with a maximum of two meters unmineralized internal dilution  
*Greater than 100 oz/t (3,110 g/t) Ag*

Hole		From (m)	To (m)	Interval (m)	Est True Width (m) <sup>1</sup>	Ag (g/t)	Ag (oz/t)	Pb (%)	Zn (%)	Au (g/t)	Vein <sup>2</sup>
K-18-0690		146.85	147.10	0.25	0.21	126	4.05	1.94	1.79	0.19	Anomaly 10
		308.45	310.20	0.25	1.49	75	2.43	0.86	0.93	0.23	Anomaly 10
K-18-0693		218.83	220.90	2.07	1.82	132	4.24	0.30	1.48	0.06	Anomaly 10
K-18-0698		210.73	212.64	1.91	1.64	301	9.68	2.52	10.90	0.45	Eagle
		234.28	234.78	0.50	0.43	75	2.40	0.80	3.06	0.06	Eagle
		236.93	239.00	2.07	1.78	40	1.27	0.32	4.75	0.13	Eagle
		240.63	241.62	0.99	0.85	93	2.99	0.25	0.59	0.19	Eagle
K-18-0700		286.90	287.73	0.83	0.72	156	5.02	1.42	3.21	0.12	Eagle
K-18-0706		78.28	79.20	0.92	0.52	43	1.38	0.38	0.05	0.29	Aho
		80.00	81.20	1.20	0.68	247	7.94	0.41	0.19	0.28	Aho
		467.07	467.45	0.38	0.33	1675	53.85	7.23	0.85	0.23	BM
		475.66	477.20	1.54	1.34	203	6.51	1.42	1.21	0.05	BM
		524.31	525.60	1.29	1.01	309	9.93	0.25	0.16	0.23	BR
K-18-0708		335.00	336.20	1.20	0.98	360	11.57	0.10	1.50	0.06	BR
		353.13	353.68	0.55	0.45	131	4.21	0.49	0.13	0.02	BR Splay
K-18-0711		307.25	310.45	3.20	2.82	418	13.43	2.18	0.70	0.05	BM
		353.00	355.47	2.47	2.00	1453	46.70	3.71	3.71	0.19	BR
	<i>Including</i>	354.23	354.97	0.74	0.60	4470	143.71	11.35	9.43	0.48	
K-18-0713		171.25	171.47	0.22	0.20	7920	254.63	0.03	5.38	0.40	Lucky Queen Splay
K-18-0714	*	216.55	217.37	0.82	0.70	24	0.77	0.41	1.02	5.36	No Cash
K-18-0717		206.65	207.90	1.25	1.13	71	2.27	0.11	1.52	0.02	Lucky Queen
K-18-0718	*	270.00	271.78	1.78	1.51	105	3.37	2.40	1.89	76.30	No Cash
		285.68	286.56	0.88	0.75	91	2.93	2.13	0.32	0.00	No Cash Splay
K-18-0719		117.35	119.00	1.65	0.36	39	1.26	0.10	0.69	0.04	Lucky Queen





K-18-0722		295.35	297.83	2.48	1.93	87	2.80	1.35	12.29	0.18	No Cash
K-18-0723		301.87	302.56	0.69	0.50	33	1.07	0.00	0.00		Unknown
K-18-0729		280.40	280.75	0.35	0.30	77	2.46	0.04	0.07	0.29	No Cash
K-18-0730		624.32	626.42	2.10	1.87	234	7.52	1.12	0.15	0.03	HC/ BM
	Including	624.32	624.58	0.26	0.23	1745	56.10	8.65	0.01	0.24	
		675.37	677.96	2.59	2.31	40	1.27	0.13	0.54	0.12	HC /BM
		680.32	684.59	4.27	3.80	94	3.03	0.06	0.10	0.15	HC /BM

<sup>1</sup> Estimated True Width from modelled vein attitude and drill intercept orientation.

<sup>2</sup> Correlated Vein: BM = Bermingham Vein, BR = Bear Vein, HC/ BM = Hector-Calumet / Bermingham vein system

\* Interval extended to include Au value