

# **News Release**

## Alexco Drills up to 12 Meters (true width) of 1,019 Grams per Tonne Silver at Bermingham; Provides Updates on Permitting and Underground Development

**August 9, 2018 - Alexco Resource Corp. (NYSE American:AXU) (TSX:AXR)** today announced initial results from its ongoing 2018 drilling program at the high-grade Bermingham deposit in the Keno Hill Silver District in Canada's Yukon Territory. Infill resource and peripheral zone drilling is currently underway from underground in the Bermingham exploration decline and from surface (for deeper extensions). The drilling will further define the previously outlined resource (858,000 tonnes with an average grade of 628 grams per tonne ("g/t") silver ("Ag") totaling an indicated 17.3 million ounces of silver), as well as more accurately outline and/or extend the upper zone of the potentially mineable tonnes (totaling 220,000 tonnes with an average grade of 1,276 g/t silver) included in the updated preliminary economic assessment dated March 29, 2017 (see news releases dated December 8, 2016, entitled "Alexco Expands Bermingham Silver Deposit, Initial Tests Confirm Excellent Metallurgical Performance" and 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"). In addition, Alexco announces updates on permitting for the Bermingham deposit and underground development at the Flame & Moth deposit.

### Highlights

In 2018 a combined total of 26 holes have been drilled from surface and underground at the Bermingham deposit with results available from 14 holes and include the following highlights:

- Significant silver-rich intercepts have been obtained from fourteen infill holes drilled within or proximal to the Bermingham resource. True width intercepts of the Bear Vein ranging up to 12.28 meters ("m") grading 1,019 g/t (32.8 ounces per tonne ("oz/t")) Ag in hole BMUG18-012 and 2.28 m grading 9,723 g/t (312.6 oz/t) Ag in drill hole BMUG18-015 (see Assay Composite Table, Drill Hole Location Map and Drill Hole Detail Table in the Appendices of this news release);
- Other significant intersections from the associated Bermingham and Bermingham Footwall veins include true width intercepts of 4.17 m grading 5,373 g/t (172.8 oz/t) Ag in hole BMUG18-015 and 4.26 m grading 1,958 g/t (63.0 oz/t) in hole BMUG18-008;
- Alexco received a positive Decision Document on July 27, 2018 by the Yukon Government for the development and production at the Bermingham deposit. Alexco has submitted a water license renewal application to the Yukon Water Board for processing and milling ore from the Bermingham mine; and
- Advancement of the Flame & Moth decline continues with the drive ~45% complete and continuing apace.

Alexco Chairman and CEO Clynt Nauman commented, "The primary goal of our Bermingham exploration program is to confirm and expand the Bermingham silver resource through tightening up drill spacing within the resource and potential production areas and to better define open extensions. We are meeting success on all fronts. As we systematically expand the drill coverage, our understanding of the complex mineralized vein system, including the high grade Bear Vein, continues to increase. In the meantime continued exploration drilling from the surface in the vicinity of the Bermingham deposit is expected to also contribute to a new resource estimate which will be released concurrent with our prefeasibility study either late Q3 or early Q4. Not to be overshadowed, we have achieved a milestone with the submission of the water license renewal application while also increasing the pace of our Flame and Moth underground development."

Head Office



#### Drilling

To date, eleven underground drill holes and three surface holes totaling 2,396 m of HQ core drilling at Bermingham have assays completed. The drilling results confirm the vein model interpretation and continuity of significant high grade silver values. The interconnected mineralized vein systems at Bermingham include very high grade shoots such as the Bear Vein where our current Preliminary Economic Assessment mine plan identifies 220,000 potentially mineable tonnes grading 1,276 g/t Ag, sitting within more extensive zones of "lower" grade mineralization with true widths up to 8.62 m thick grading more than 600 g/t Ag (see 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").

Since the completion of the underground exploration decline at Bermingham in May 2018, underground resource infill drilling utilizing two drill rigs commenced and to the date of this release, 3,650 m of underground HQ core drilling has been completed in 21 drill holes. At the same time, surface drilling to complement and extend the deeper part of the resource commenced in early June, and to date five holes for 1,499 m of HQ core drilling has been completed. Assay results for 14 of these 26 holes have been completed and are reported here.

The underground drill program is designed to provide close spaced intersections at 10 - 15 m of the high-grade Bear Vein Indicated Resource that might allow conversion to a Measured Resource category in the upper levels of planned mine development once the program is complete, and to also intersect the other adjacent Bermingham veins to extend the current resource.

#### 2018 Progress Drill Composite Assay Interval Highlights

- BMUG18-012 25.07 m interval (12.28 m true width) from 136.25 m at 1,019 g/t (32.8 oz/t) Ag; 2.07% lead ("Pb"); 1.27% zinc ("Zn"); that includes the 2.07 m interval (1.01 m true width) from 138.05 m at 8,435 g/t (271.2 oz/t) Ag.
- BMUG18-015 7.59 m interval (4.17 m true width) from 136.06 m at 5,373 g/t (172.8 oz/t) Ag; 5.88% Pb; 4.91% Zn; that includes the 4.15 m interval (2.28 m true width) from 137.20 m at 9,723 g/t (312.6 oz/t) Ag.
- BMUG18-008 6.46 m interval (4.26 m true width) from 115.20 m at 1,958 g/t (63.0 oz/t) Ag; 5.81% Pb; 2.69% Zn.
- BMUG18-010 10.17 m interval (7.22 m true width) from 101.53 m at 841 g/t (27.0 oz/t) Ag; 1.73% Pb; 1.50% Zn; that includes the 6.17 m interval (4.38 m true width) from 101.53 m at 1,288 g/t (41.4 oz/t) Ag.
- BMUG18-007 1.11 m interval (0.77 m true width) from 111.24 m at 3,428 g/t (110.2 oz/t) Ag; 12.14% Pb; 3.12% Zn; that includes the 0.66 m interval (0.46 m true width) from 111.24 m at 5,650 g/t (181.6 oz/t) Ag.
- K-18-0677 1.14 m interval (0.98 m true width) from 311.96 m at 1,515 g/t (48.7 oz/t) Ag; 4.08% Pb; 3.01% Zn; that includes the 0.44 m interval (0.38 true width) from 311.96 m at 3,490 g/t (112.2 oz/t) Ag; and also the 1.60 m interval (1.38 m true width) from 325.75 m at 1,040 g/t (33.4 oz/t) Ag; 1.10% Pb; 0.92% Zn; that includes the 0.13 m interval (0.11 m true width) from 325.75 m at 12,126 g/t (389.8 oz/t) Ag.
- BMUG18-005 3.87 m interval (3.10 m true width) from 92.13 m at 786 g/t (25.3 oz/t) Ag; 1.4% Pb; 0.37% Zn; that includes the 0.54 m interval (0.43 m true width) from 92.13 m at 4,820 g/t (155.0 oz/t) Ag.



Details of the drill holes are shown in Table 1. Composite assay grades and intervals, calculated at a 30 g/t Ag cutoff restricted to include a maximum of two meters unmineralized dilution, used to identify the mineralized zones are shown in Table 2.

#### **Permitting Update**

Alexco has completed the environmental assessment process for the Bermingham Development and Production Program with the issuance of a positive Decision Document on July 27, 2018 by the Yukon Government as the Decision Body. The Decision Document outlines a number of standard terms and conditions for the development and mine production at the Bermingham deposit. These terms and conditions will be incorporated into the Company's Quartz Mining and Water Licences for Bermingham. With the issuance of the Decision Document, Alexco has recently submitted a water license renewal application to the Yukon Water Board for processing and milling ore and discharging treated water from the Bermingham mine.

#### Mine Development Update

Following completion of the Bermingham exploration decline in early May 2018, Alexco relocated its underground mine development team and equipment to the Flame and Moth deposit to resume decline and ramp development. To date, 283 meters of primary development has been completed including supporting remuck bays and sumps. The Flame and Moth decline is being constructed at a design of 15% grade and sized 3.7 m wide x 4.0 m high and will accommodate new underground drilling headings as well as haulage of a planned 260 tonnes of ore per day to the primary crusher which is located within 200 m of the mine portal. Approximately 310 m of ramp development and supporting remuck bays remains to reach the first ore level access at the Lightning Zone within the Flame and Moth deposit.

#### 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 deliver 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, while that regarding mine development and operations has been reviewed 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").

#### About Alexco

Alexco owns the majority of the historic high-grade Keno Hill Silver District in Canada's Yukon Territory. Alexco published an updated Preliminary Economic Assessment in March 2017, which 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.



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 forwardlooking 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

Hole	Easting	Northing	Elevation (m)	Surface Azimuth	Surface Dip	Length (m)	Date Started	Date Completed
BMUG 18-003	479026.41	7086929.35	1161.63	138	-11	105	2018-05-18	21/05/18
BMUG18-004	479021.824	7086941.655	1163.624	117	-15	108	17/05/18	21/05/18
BMUG18-005	479027.123	7086929.277	1161.546	131	-12	99	21/05/18	26/05/18
BMUG18-006	479022.01	7086941.362	1163.648	124	-12	117	21/05/18	25/05/18
BMUG18-007	479022.201	7086941.892	1163.462	126	-24	118.5	25/05/18	29/05/18
BMUG18-008	479026.056	7086928.846	1161.266	139	-20	124.5	25/05/18	29/05/18
BMUG18-009	479022.316	7086941.959	1163.52	127	-19	114	29/05/18	2/06/18
BMUG18-010	479025.927	7086928.788	1161.575	139	-16	121.5	29/05/18	6/06/18
BMUG18-011	479022.062	7086941.759	1163.28	136	-27	130.5	2/06/18	8/06/18
BMUG18-012	479025.772	7086928.624	1161.222	143	-30	176.52	6/06/18	17/06/18
BMUG18-015	479025.971	7086928.6	1161.301	143	-27	234	19/06/18	25/06/18
K-18-0677	479094.7825	7086617.405	1356.95	286	-56	362	8/05/18	20/05/18
K-18-0686	479095.5403	7086617.673	1356.952	294	-62	400.5	25/05/18	2/06/18
K-18-0689	479021.9052	7086665.678	1350.482	286	-68	289.5	2/06/18	7/06/18



Figure 1 – Drill Hole Locations





Hole	From (m)	To (m)	Interval (m)	Est. True Width (m) <sup>1</sup>	Ag (g/t)	Ag (oz/t)	Au (g/t)	Pb (%)	Zn (%)	Vein Name <sup>2</sup>
BMUG-003	88.50	98.05	9.55	7.64	121	3.89	0.01	0.19	0.87	BR Vein
including	94.50	95.16	0.66	0.53	1012	32.54	0.03	1.45	6.88	
BMUG18-004	99.00	102.41	3.41	2.86	208	6.69	0.01	2.18	0.02	BR Vein
Including	99.00	99.41	0.41	0.34	1540	49.51	0.08	17.55	1.07	
	105.00	106.50	1.50	1.26	208	6.69	0.01	0.78	0.09	
BMUG18-005	87.64	88.13	0.49	0.39	178	5.72	0.03	1.33	0.51	BR Vein
	92.13	96.00	3.87	3.10	786	25.26	0.02	1.40	0.37	
Including	92.13	92.67	0.54	0.43	4820	154.96	0.09	6.72	0.41	
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BMUG18-006	96.58	102.00	5.42	4.55	107	3.44	0.02	0.41	0.40	BR Vein
	109.50	115.50	6.00	5.04	99	3.19	0.00	0.10	0.65	
Including	112.95	113.58	0.63	0.53	426	13.70	0.03	0.13	3.89	
BMUG18-007	111.24	112.35	1.11	0.77	3428	110.20	0.26	12.14	3.12	BR Vein
Including	111.24	111.90	0.66	0.46	5649	181.63	0.42	20.31	4.60	
BMUG18-008	12.75	13.65	0.90	0.59	877	28.20	0.07	1.30	1.50	BR Vein
	115.20	121.66	6.46	4.26	1958	62.95	0.17	5.81	2.69	
	1	1	1	1		1	1	1	1	1
BMUG18-009	104.01	107.59	3.58	2.72	315	10.12	0.02	0.91	0.32	BR Vein
Including	104.82	106.50	1.68	1.28	594	19.10	0.04	1.77	0.46	
			1	Γ	r		1	1	1	1
BMUG18-010	85.50	86.66	1.16	0.82	147	4.73	0.01	0.66	0.05	BR Vein
	95.72	96.32	0.60	0.43	43	1.38	0.02	0.60	0.04	
	101.53	111.70	10.17	7.22	841	27.05	0.06	1.73	1.50	
Including	101.53	107.70	6.17	4.38	1288	41.41	0.07	2.82	2.09	
and Including	111.14	111.70	0.56	0.40	416	13.37	0.08	0.22	0.84	
	118.84	120.19	1.35	0.96	506	16.27	0.06	0.01	0.02	
BMUG18-011	12.00	13.50	1.50	0.90	33	1.05	0.01	0.38	0.05	
	121.50	129.22	7.72	4.63	2045	65.78	0.21	7.14	0.97	BR Vein
Including	124.26	127.87	3.61	2.17	3483	111.99	0.25	12.22	1.56	
BMUG18-012	136.25	161.32	25.07	12.28	1019	32.76	0.13	2.07	1.27	BR Vein
Including	138.05	140.12	2.07	1.01	8435	271.17	0.88	15.50	5.76	

## Table 2 - Preliminary 2018 Bermingham Assay Composites



Hole	From (m)	To (m)	Interval (m)	Est. True Width (m) <sup>1</sup>	Ag (g/t)	Ag (oz/t)	Au (g/t)	Pb (%)	Zn (%)	Vein Name <sup>2</sup>
and Including	148.22	154.71	6.49	3.18	963	30.97	0.11	2.14	1.31	
BMUG18-015	130.50	132.70	2.20	1.21	141	4.55	0.19	0.12	0.07	BR Vein
	136.06	143.65	7.59	4.17	5373	172.75	0.38	5.88	4.91	
Including	137.20	141.35	4.15	2.28	9723	312.58	0.66	10.68	8.85	
	204.00	213.00	9.00	6.66	647	20.80	0.07	0.60	1.33	BM FW Vein
Including	206.38	213.00	6.62	4.90	854	27.47	0.07	0.67	1.56	
	221.68	226.15	4.47	3.31	188	6.04	0.10	1.35	1.18	
Including	224.29	225.43	1.14	0.84	484	15.56	0.25	4.70	3.48	
K-18-0677	284.00	284.62	0.62	0.30	45	1.44	0.03	0.59	1.58	Aho Vein
	311.96	313.10	1.14	0.98	1515	48.70	0.13	4.08	3.01	BM Main
Including	311.96	312.40	0.44	0.38	3490	112.20	0.21	9.48	6.00	
	325.75	327.35	1.60	1.38	1040	33.43	0.13	1.10	0.92	BM splay
Including	325.75	325.88	0.13	0.11	12126	389.84	1.35	9.69	8.18	
	332.08	345.61	13.53	9.47	457	14.68	0.06	0.66	0.72	FW Vein
Including	335.54	338.72	3.18	2.23	1022	32.85	0.13	1.98	1.39	
and Including	341.00	341.76	0.76	0.53	1580	50.80	0.08	1.04	0.24	
	-				-					-
K-18-0686	280.58	284.70	4.12	2.22	156	5.01	0.04	1.00	0.59	Aho Vein
Including	284.40	284.70	0.30	0.16	958	30.80	0.28	1.84	4.46	
	323.37	328.07	4.70	3.90	313	10.07	0.06	0.46	0.93	BM Main
Including	324.85	326.84	1.99	1.65	601	19.31	0.10	0.79	1.92	
	333.21	334.71	1.50	1.25	143	4.58	0.04	0.05	0.47	BM splay
	356.94	357.88	0.94	0.65	221	7.11	0.08	1.47	0.91	FW Vein
	362.05	363.74	1.69	1.15	37	1.19	0.02	0.28	0.37	BR Vein
	371.00	371.52	0.52	0.35	463	14.89	0.03	7.14	0.07	
	373.37	374.00	0.63	0.43	112	3.60	0.03	0.83	0.42	
K-18-0689	248.00	254.00	6.00	4.44	252	8.10	0.04	0.28	0.82	BM Main
Including	250.80	252.80	2.00	1.48	557	17.89	0.06	0.62	1.38	
	256.50	263.45	6.95	5.14	299	9.60	0.06	0.43	1.20	BM splay
Including	261.35	262.80	1.45	1.07	1295	41.63	0.15	1.48	4.48	
	265.80	268.35	2.55	1.43	211	6.79	0.03	0.88	0.34	BM FW splay
Including	266.00	266.42	0.42	0.24	774	24.88	0.11	2.15	0.80	
	271.00	275.60	4.60	2.58	485	15.60	0.06	0.84	0.71	BM FW Vein
Including	275.15	275.60	0.45	0.25	4480	144.03	0.43	6.66	0.87	

 Table 2
 Preliminary Bermingham Assay Composites



Calculated at 30 g/t Ag cut-off with a maximum of two meters unmineralized internal dilution. Calculated at 400 g/t Ag cut-off with a maximum of two meters unmineralized internal dilution.

- 1 Estimated True Width from modelled vein attitude and drill hole intercept orientation.
- 2 Correlated Vein : BM = Bermingham, BM FW = Bermingham Footwall Vein, BR = Bear Vein.