



News Release

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

December 4, 2019 - Alexco Resource Corp. (NYSE American: AXU) (TSX: AXU) (“Alexco” or the “Company”) reports final results from the 2019 drilling program at the Keno Hill Silver District property in Canada’s Yukon Territory. Following the successful demonstration of the presence of deeper mineralization adjacent to the existing resource at Bermingham Northeast (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 “Bermingham Deep” target”), Alexco embarked on an approximate 3,000 meter (“m”) surface drill program targeting areas with a geological setting interpreted to be similar to that of the high-grade Bermingham deposit. A new discovery at the Inca target returned encouraging results as follows:

Highlights

Inca – New Discovery

- K-19-0749 intersected the Inca vein over a true width of 7.44 m at a composite grade of 832 grams per tonne (“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.

Alexco’s Chairman and Chief Executive Officer, Clynt Nauman, commented, “The Inca discovery reflects the increasing confidence our geology team has in predicting the geological setting in which these deposits occur at Keno Hill. It is another blind discovery that is open along strike and down dip, but perhaps more importantly it is within a favourable structure which has at least 800 meters of untested strike length in rocks which are known to host most of the silver deposits in the district. Clearly, more work is required in 2020 to better understand the importance of the Inca discovery.”

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Inca - Geology Detail

The Inca Fraction quartz claim is located approximately 1.5 kilometers from the district mill and covers an area in which a vein-structure demonstrates an abrupt change in strike from east-northeast to a more mineralization favourable north-northeast attitude. A total of 1,893 m were drilled in 12 drill holes with several encountering significant silver grades over wide intervals as noted above. The mineralized structure is characterized by massive, somewhat banded, mineralized hydrothermal vein and breccia over true widths of up to eight meters. The central portion of the structure is surrounded by a 20 m to 70 m fracture zone characterized by sets of narrow mineralized veinlets and stringers. The mineralization consists primarily of siderite gangue together with abundant sphalerite (note that K-19-0756 contained 10.7% zinc over a true width of 5.50 m). Argentiferous tetrahedrite is observed as coarse centimetre-width bands and as dispersed grains, closely associated with the lead minerals, generally galena or boulangerite. Pyrite, arsenopyrite, chalcopyrite, and orpiment are variably observed as accessory minerals. The vein structure displays approximately 200 m of apparent left-lateral displacement, the magnitude of which suggests this structure fits into the upper tier of Keno style mineralized structures, along with both Birmingham and Flame & Moth. The discovery drilling at Inca was mainly wide-spaced (80 m to 150 m) but ranged down to 30 m in places to test for grade-thickness continuity at the shoot scale. Drilling explored to a maximum depth below surface of 190 m and along a 280 m strike length, however, the structure is open along strike and down dip, with favourable basal quartzite containing a possible further 800 m of unexplored strike length.

Remaining 2019 Drill Results – Highlights

Birmingham Deep (previously unreported but with location shown in the September 10, 2019 Press Release)

- K-19-0739 – intersected 76 g/t (2.43 oz/t) Ag in the Birmingham vein over a 1.47 m true width interval from 585.30 m, and 1,190 g/t (38.26 oz/t) Ag in the Birmingham Footwall vein over 0.24 m true width from 646.95 m, thus continuing to confirm the depth extensions to the mineralized system.

Dixie

- K-19-0752 intersected the Dixie vein over a true width of 0.93 m grading 536 g/t (17.2 oz/t) Ag from 202.38 m.

No Cash

- K-19-0741 intersected the No Cash vein over a true width of 0.35 m grading 550 g/t (17.68 oz/t) Ag from 80.47 m.

Geology and Drilling General

Following the completion of the Birmingham drilling program in August 2019, an additional 3,193 m were drilled in 19 holes on other prospects on Galena Hill (Table 1) where geophysical data indicated the presence of north-northeast striking vein segments related to historically-known silver mineralized veins. As described above, this work resulted in a new discovery along a northern segment of a vein system that is referred to as the Inca Prospect.



In total, the 2019 Keno Hill exploration core drilling program on Galena Hill concluded in mid-October with the completion of 29 holes and 8,333 m, with the majority of the effort focused at Bermingham where there was success in confirming the presence of wide structural zones containing silver and base metal bearing veins up to and over 200 m at depth below the outlined Bermingham reserve and resource. The latter part of the season was focused on drill testing for shallow, blind targets in areas where structural and stratigraphic interpretation indicated the possibility for discovery of additional silver mineralization as either extensions of known veins or previously unrecognized systems.

In addition to the Inca discovery, results have confirmed the extensions to the historically mined veins at No Cash and Dixie where 527.8 m and 771.6 m were drilled, respectively, in both cases confirming the extension of mineralized structures beyond known areas. As well as drilling and geophysics related work, Alexco initiated a trial rotary air blast (“RAB”) drilling program, primarily to obtain geological and structural information to better target follow-up diamond drilling. The program was successful and will be expanded in future exploration programs, along with follow-up of results from 2019.

Qualified Persons

The disclosure in this news release 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, who is a Qualified Person 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 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 – 2019 Diamond Drill Holes Completed at No Cash, Dixie and Inca Prospects

Hole	Easting (m)	Northing (m)	Elevation (m)	Length (m)	Collar Azimuth	Collar Inclination
K-19-0741	477999.63	7087187.73	1182.48	143.50	280	-45
K-19-0742	478000.70	7087187.60	1182.42	113.00	280	-66
K-19-0743	478001.31	7087187.46	1182.34	173.33	280	-82
K-19-0744	477992.77	7087234.60	1175.29	98.00	290	-69
		4 Holes	No Cash	527.83		
K-19-0750	476934.88	7086697.24	1060.01	251.71	330	-52
K-19-0751	476934.89	7086697.00	1059.96	250.32	330	-65
K-19-0752	476881.97	7086643.65	1057.76	269.60	305	-63
		3 Holes	Dixie	771.63		
K-19-0745	482655.44	7087752.63	1171.75	86.00	318	-45
K-19-0746	482656.45	7087751.42	1171.66	68.45	314	-76
K-19-0747	482679.03	7087665.52	1157.15	109.23	292	-60
K-19-0748	482679.76	7087665.22	1157.16	137.00	292	-80
K-19-0749	482700.65	7087553.57	1138.25	218.00	280	-60
K-19-0753	482678.12	7087482.02	1138.32	216.48	280	-48
K-19-0754	482678.53	7087481.95	1138.26	213.30	280	-60
K-19-0755	482679.02	7087481.78	1138.30	241.15	280	-71
K-19-0756	482702.08	7087552.33	1137.96	180.00	287	-48
K-19-0757	482703.46	7087551.93	1137.68	207.00	287	-73
K-19-0758	482532.05	7087610.66	1208.81	115.70	305	-85
K-19-0759	482496.65	7087540.55	1200.20	101.00	305	-85
		12 Holes	Inca	1,893.31		

19 Holes Total 3,192.77



Table 2 – Assay Composites: Calculated using 30 g/t Ag cut off with up to 2 m internal waste

Prospect	Hole		From (m)	To (m)	Interval (m)	True Thickness (m)	Ag (g/t)	Ag (oz/t)	Pb (%)	Zn (%)	Au (g/t)	Vein	
Birmingham	K-19-0739		585.30	587.00	1.70	1.47	76	2.43	0.62	0.90	0.02	Birmingham	
			646.95	647.32	0.37	0.24	1190	38.26	13.45	0.01	0.12	Birmingham Footwall	
No Cash	K-19-0741		80.47	80.85	0.38	0.35	550	17.68	0.28	0.24	0.33	No Cash	
	K-19-0743		91.91	92.13	0.22	0.14	51	1.64	0.01	0.03	0.07	No Cash Splay	
		108.09	109.20	1.11	0.68	33	1.06	0.24	0.02	0.02	No Cash		
Dixie	K-19-0750		207.26	208.27	1.01	0.78	50	1.62	0.01	0.21	0.14	Dixie	
	K-19-0751		207.34	209.37	2.03	1.41	67	2.17	0.70	2.92	0.04	Dixie Splay	
			213.94	214.72	0.78	0.54	244	7.84	0.33	1.87	0.03	Dixie Splay	
			238.96	241.32	2.36	1.64	87	2.79	0.08	0.08	0.13	Dixie	
	K-19-0752		171.32	172.70	1.38	1.09	55	1.75	0.62	0.26	0.01	Dixie Splay	
		202.38	203.56	1.18	0.93	536	17.23	0.00	0.17	2.48	Dixie		
Inca	K-19-0745		41.00	41.53	0.53	0.51	61	1.95	0.14	0.10	0.10	Inca	
	K-19-0748		117.55	128.81	11.26	8.23	85	2.74	0.69	1.82	0.15	Inca	
	K-19-0749	<i>including</i>		129.65	132.93	3.28	2.85	157	5.04	0.65	1.35	0.26	Inca Splay
				142.61	151.16	8.55	7.44	832	26.75	0.65	6.03	0.30	Inca
				<i>142.61</i>	<i>144.45</i>	<i>1.84</i>	<i>1.60</i>	<i>1190</i>	<i>38.26</i>	<i>0.75</i>	<i>2.54</i>	<i>0.35</i>	
				<i>146.00</i>	<i>146.52</i>	<i>0.52</i>	<i>0.45</i>	<i>1305</i>	<i>41.96</i>	<i>1.43</i>	<i>3.67</i>	<i>0.51</i>	
			<i>148.27</i>	<i>149.13</i>	<i>0.86</i>	<i>0.75</i>	<i>3860</i>	<i>124.10</i>	<i>2.57</i>	<i>22.50</i>	<i>1.46</i>		
	<i>149.13</i>	<i>149.45</i>	<i>0.32</i>	<i>0.28</i>	<i>1295</i>	<i>41.64</i>	<i>1.90</i>	<i>7.30</i>	<i>0.31</i>				

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ALEXCO

			168.35	168.55	0.20	0.17	118	3.79	0.11	40.30	8.45	Inca Splay
			180.79	181.09	0.30	0.26	37	1.19	0.08	8.45	0.11	Inca Splay
	K-19-0753		160.17	162.25	2.08	2.01	205	6.61	0.25	4.72	0.10	Inca
			173.32	174.54	1.22	1.18	31	1.00	0.02	0.87	0.09	Inca Splay
			178.64	178.90	0.26	0.25	36	1.16	0.04	26.00	0.32	Inca Splay
	K-19-0754	<i>including</i>	92.40	92.78	0.38	0.35	73	2.35	0.39	0.51	0.18	Inca Splay
			161.00	169.75	8.75	8.06	127	4.09	0.68	2.64	0.13	Inca
			<i>167.75</i>	<i>168.15</i>	<i>0.40</i>	<i>0.37</i>	<i>2070</i>	<i>66.55</i>	<i>7.06</i>	<i>15.35</i>	<i>0.71</i>	
			171.91	172.14	0.23	0.21	542	17.43	12.45	2.31	0.03	Inca
			174.55	178.70	4.15	3.82	111	3.58	0.54	6.53	0.40	Inca
	K-19-0755		183.66	186.85	3.19	2.64	73	2.36	0.10	6.36	1.90	Inca
			190.25	192.57	2.32	1.92	68	2.20	0.13	3.26	0.41	Inca
	K-19-0756	<i>including</i>	128.08	130.30	2.22	2.18	67	2.16	1.28	1.67	0.04	Inca
			134.40	140.00	5.60	5.50	597	19.18	6.17	10.72	0.29	Inca
			<i>134.40</i>	<i>134.70</i>	<i>0.30</i>	<i>0.29</i>	<i>1365</i>	<i>43.89</i>	<i>36.34</i>	<i>13.55</i>	<i>0.46</i>	
			<i>135.84</i>	<i>136.41</i>	<i>0.57</i>	<i>0.56</i>	<i>2070</i>	<i>66.55</i>	<i>18.10</i>	<i>1.36</i>	<i>0.67</i>	
			<i>136.41</i>	<i>137.61</i>	<i>1.20</i>	<i>1.18</i>	<i>1110</i>	<i>35.69</i>	<i>3.07</i>	<i>11.45</i>	<i>0.64</i>	
			143.70	144.88	1.18	1.16	780	25.08	0.06	0.46	0.22	Inca
	K-19-0757		168.54	170.00	1.46	1.20	42	1.33	0.01	10.15	0.07	Inca
			175.38	176.77	1.39	1.14	38	1.21	0.05	3.08	0.03	Inca
			179.69	182.08	2.39	1.96	73	2.35	0.04	5.79	0.13	Inca
	K-19-0758		52.22	63.76	11.54	7.57	33	1.05	0.26	0.68	0.02	Inca



Figure 1 – Drill Hole Locations

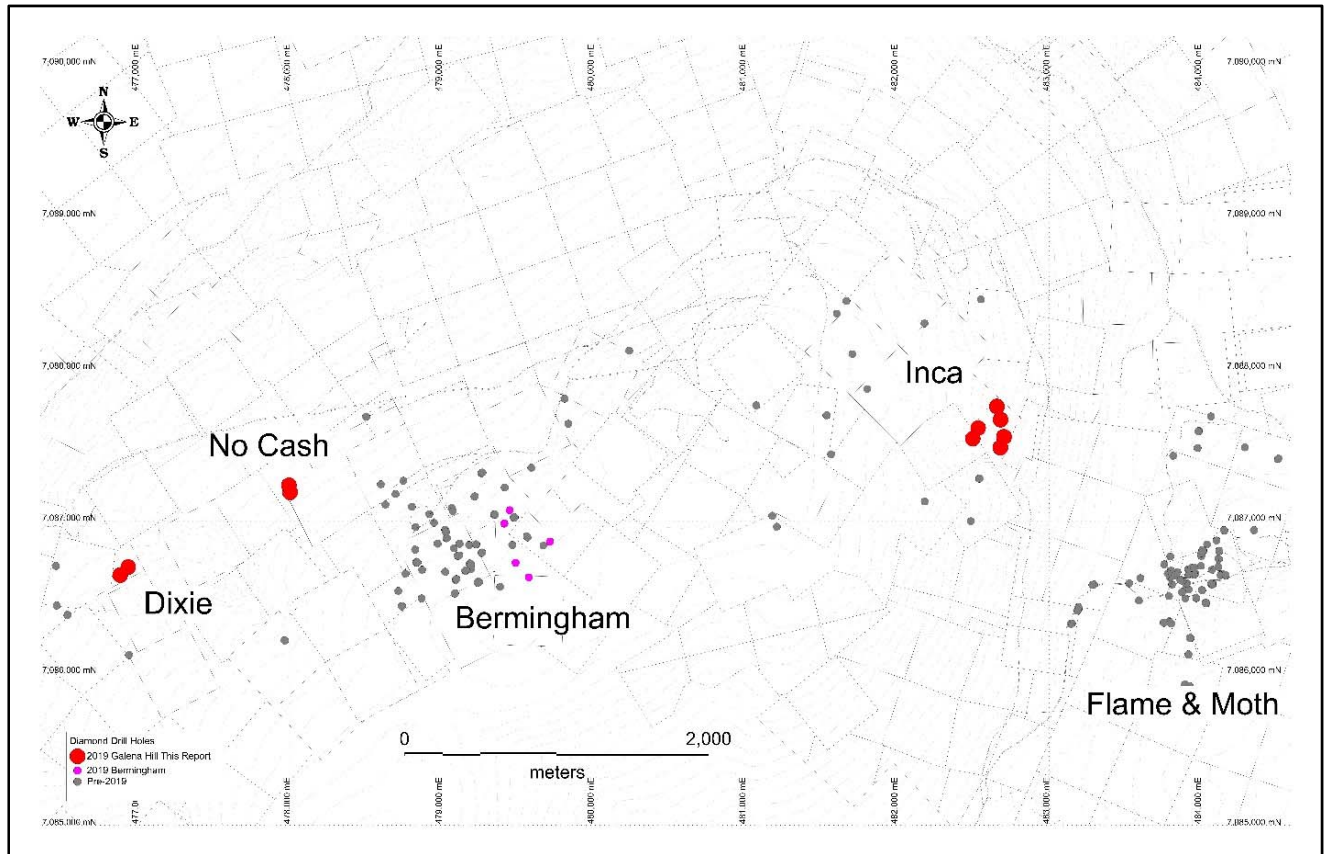


Figure 2 – Inca Prospect Longitudinal Section (looking NW) showing the +30 g/t Ag composite intervals

