



News Release

Alexco Announces Indicated Silver Resource Estimate Increases of 17% at Flame & Moth and 37% at Bermingham, Resulting in a 10% Increase Overall for Keno Hill Silver District

April 30, 2015 - Alexco Resource Corp. (TSX:AXR, NYSE-MKT:AXU) today reports updated mineral resource estimates for the Flame & Moth and Bermingham deposits, both located within the Keno Hill Silver District in Canada's Yukon Territory. The Flame & Moth indicated mineral resource estimate is expanded from approximately 22.9 million ounces to approximately 26.7 million ounces of contained silver, representing a 17% increase, while inferred mineral resources in the same deposit increased from approximately 1.1 million ounces to 4.1 million ounces of contained silver. At Bermingham, indicated mineral resources have expanded from 3.8 million ounces to 5.2 million ounces of contained silver. These resources have resulted in an approximate 10% increase from 50.2 million ounces to 55.4 million ounces of contained silver in Alexco's combined indicated mineral resources at its Keno Hill properties. These overall increases in mineral resource estimates are the result of approximately 18,000 meters of surface diamond drilling completed in 2014.

The updated mineral resource estimates were prepared by SRK Consulting (Canada) Inc. ("SRK") and are summarized as follows:

Deposit	Class ^{1,2,3}	Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag (Troy ounces)
Flame & Moth ⁴	Indicated	1,638,000	506	0.43	1.89	5.4	26,650,000
	Inferred	348,000	366	0.26	0.47	4.37	4,095,000
Bermingham ⁵	Indicated	377,000	430	0.07	1.59	1.74	5,212,000
	Inferred	52,000	477	0.12	1.22	1.88	797,000

Notes:

1. The effective date of these mineral resource estimates is April 28, 2015.
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\$0.85=C\$1) using consensus long term metal prices (US\$) and recoveries developed for the nearby Bellekeno deposit (Ag US\$20.00/oz, recovery 96%; Pb US\$0.94/lb, recovery 97%; Zn US\$1.00/lb, recovery 88%; Au US\$1,300/oz, recovery 72%).
4. Ag grades capped at 7,500 grams per tonne ("g/t"); Zn capped at 30%; limited influence of high grade intersections during estimation.
5. Ag grades capped at 1,500 g/t for the Bermingham Vein and the Bermingham Footwall Vein; Pb capped at 9% for both veins; Au grades capped at 1.0 g/t for both veins.



Alexco President and Chief Executive Officer Clynt Nauman said, “Once again our exploration geologists have demonstrated the tenor and continuity of silver mineralization at Keno Hill, increasing district-wide indicated silver resources for the sixth year in a row. This is especially important at the Flame & Moth deposit, which in aggregate is now the second largest deposit ever discovered in the historic district. Even more impressive, the Flame & Moth deposit is essentially a blind discovery, with an average grade of more than 500 grams per tonne (g/t) and average true thicknesses of 4 to 5 meters with higher grades for more than half of its approximately one kilometer traceable length. And therein lies our confidence in exploration to unlock additional value in the district, and our commitment to continued exploration in 2015.”

A summary of all of Alexco’s Keno Hill Silver District mineral resources incorporating the updated mineral resource estimates for Flame & Moth and Birmingham are appended to this release, and are available for review on the Company’s website at www.alexcoresource.com.

Flame & Moth

Highlights of the Flame & Moth 2014 exploration program came from the Christal Zone, which returned a best composite silver assay of 1,483 g/t silver (47.7 ounces per tonne (opt)) over 6.2 meters true width and separately, a maximum true width intercept of 13.3 meters at 207 g/t silver (6.7 opt) of mineralization (see news release dated January 20, 2015, entitled “Alexco Intersects 1,483 Grams per Tonne Silver (47.7 Ounces Per Tonne) over 6.2 Meters True Width at Flame & Moth Deposit in the Keno Hill Silver District”). The mineralization comprises multiphase quartz and siderite veining developed within a broad host fault structure and locally contains massive galena, sphalerite, pyrite, and pyrrhotite with associated silver sulphosalts, arsenopyrite and chalcopyrite. Gold is locally present at grades up to 6.85 g/t. The total drilled strike length of the Flame & Moth vein system in the area around the existing resource now measures approximately 1,150 meters.

The Flame & Moth resource model comprises a north-northeast striking, moderately southeast dipping Flame Vein that is divided into two segments by the northwest striking Mill Fault. The Flame Vein outlined in the hangingwall of the Mill Fault has been designated the Lightning zone, and the footwall portion termed the Christal zone. A small splay vein exists in the hangingwall of the Lightning zone. Alexco conducted surface diamond drilling programs at Flame & Moth in 2010 through 2014, initiating 138 core holes, of which 115 core holes totaling approximately 31,382 meters were completed to target. Of these, 112 holes were used in the modeling and resource estimate.

The Flame & Moth resource was estimated using 3D Gemcom block modeling software in multiple passes in 3 by 5 by 5 meter blocks utilizing kriging for silver, lead and zinc, and inverse distance squared for gold. Grade estimates were based on one meter composited assay data. A small number of extremely high grade samples were capped at 7,500 g/t for silver and 30% for zinc in the Lightning portion of the Flame Vein. The influence of high grade intersections were limited during estimation by selecting high grade thresholds for silver, gold, lead and zinc for each vein portion. Blocks were classified as indicated mineral resources if at least two drill holes and six composites were found within a 40 by 40 meter search ellipse. All other interpolated blocks were classified as inferred mineral resources.



Birmingham

As previously reported, results from 2014 work at the Birmingham deposit included the best hole ever drilled by Alexco at Keno Hill. This drill hole intercepted 6.39 meters true width with a composite silver grade of 5,667 g/t silver (165.3 opt), which included 1.81 meters true width assaying 18,270 g/t (532.9 opt) silver (see news release dated November 5, 2014, entitled “Alexco Drills Best Hole Ever: Intersects 5,667 Grams Per Tonne Silver Over 6.39 Meters (true width) at Birmingham; Mineralization Extended and Remains Open”).

Nauman said, “Again, the favourable tenor and thickness of newly discovered mineralization at Birmingham, as noted above, is very encouraging. Birmingham is along strike and within about a kilometer of the historic Hector-Calumet mine, which produced about 90 million ounces of silver. Clearly, the area between this new discovery and the historic Hector-Calumet mine will be prime real estate for exploration in 2015. The potential for another significant silver discovery of the Flame & Moth type is evident from our 2014 success.”

Alexco conducted surface diamond drilling programs at Birmingham in 2009 to 2012 and 2014, with 60 holes drilled for 13,244 meters, of which 38 holes totaling 10,412 meters were used in the modeling and resource estimation. The drilling outlined the Birmingham Vein with a north-northeast strike and moderate southeast dip, converging to the northeast with the Birmingham Footwall Vein which has a northeast strike and dips moderately to steeply to the southeast. The veins typically occur within a 5 to 10 meter wide structurally-damaged and complex zone containing discrete veins 0.5 to 2.5 meters wide that consist predominantly of carbonate (dolomite, ankerite and siderite), quartz and calcite gangue with sphalerite, galena, pyrite and arsenopyrite, and accessory chalcocopyrite, argentian tetrahedrite, jamesonite, pyrargyrite and native silver.

The Birmingham resource model estimates the Birmingham Vein and the merging Birmingham Footwall Vein within the Etta Zone and the Artic Zone, which lie on either side of the post-mineral Mastiff Fault. Importantly, the exceptionally high grade mineralization intersected in 2014 is not included in the current resource estimate due to lack of confirmatory drilling in the down-plunge areas of the Birmingham resource.

The Birmingham mineral resource was estimated using 3-D Gemcom block modeling software in multiple passes in 5 by 5 by 3 meter blocks by inverse distance squared. Grade estimates were based on capped one meter composited assay data. Capping levels were set to 1,500 g/t for silver for the Birmingham Vein and the Birmingham Footwall Vein, and 1.0 g/t gold for both veins; and lead was capped at 9% for both veins. Blocks were classified as indicated mineral resources if at least two drill holes and four composites were found within a 40 by 40 meter search ellipse. All other interpolated blocks were classified as inferred mineral resources.

2015 Exploration Plans

Alexco is currently planning a 2015 exploration program of approximately 5,000 meters of surface diamond drilling primarily to follow up on the successful results at Birmingham, and also possibly test other tier one targets as time, funding and budget allow.

Qualified Persons

SRK prepared the updated mineral resource estimates for both the Flame & Moth and Birmingham deposits, and is independent of Alexco for purposes of National Instrument 43-101 - *Standards of Disclosure for*



Mineral Projects (“NI 43-101”). The Flame & Moth mineral resource estimate was completed by Marek Nowak, P.Eng., Principal Consultant with SRK, and the Bermingham mineral resource estimate was completed by Dr. Gilles Arseneau, P.Geo., Associate Consultant (Resource Geology) with SRK, both of whom are Qualified Persons as defined by NI 43-101. Dr. Arseneau and Mr. Nowak have reviewed, verified and approved the contents of this news release relating to the mineral resource estimates for the Flame & Moth and Bermingham deposits. 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 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 2014 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. 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 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 Resource Corp. owns substantially all of the historical Keno Hill Silver District located in Canada’s Yukon Territory, including the Bellekeno silver mine, the Flame & Moth, Lucky Queen, Bermingham and Onek deposits, and other historic and surface resources within the district. Bellekeno, which commenced commercial production at the beginning of calendar year 2011, was Canada’s only operating primary silver mine from 2011 to 2013. Alexco is currently undergoing an interim suspension of operations at Keno Hill in order to decrease costs and reposition the district for long-term, sustainable operations. Between 1921 and 1988, the Keno Hill Silver District was a world-class silver producer, with more than 217 million ounces of silver produced at average grades of 40.5 ounces per ton silver, 5.6% lead and 3.1% zinc (Yukon Government’s Minfile database). These historical production grades would rank Keno Hill in the top 3% by grade of today’s global silver producers. Employing a unique business model, Alexco also provides mine-related environmental services, remediation technologies and reclamation and mine closure services to both government and industry clients through the Alexco Environmental Group, its wholly-owned environmental services division.

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Certain statements ("forward-looking statements") in this news release contain forward-looking information concerning the Company's anticipated results and developments in the Company'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, the Company has applied several material assumptions, including, but not limited to, the assumption that the Company 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. The Company 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 TO ALEXCO APRIL 30, 2015 NEWS RELEASE

Summary of Resources

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

Category ^{1,2,11}	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}	124,000	1,227	0.2	2.6%	1.7%	4,892,000
	Flame & Moth Deposit ^{3&6}	1,638,000	506	0.4	1.9%	5.4%	26,650,000
	Onek ^{3&7}	654,000	200	0.6	1.3%	12.3%	4,205,000
	Birmingham ^{3&8}	377,000	430	0.1	1.6%	1.7%	5,212,000
	Total Indicated – Sub-Surface	3,055,000	467	<i>n/a</i>	1.9%	6.3%	45,886,000
	Elsa Tailings ⁹	2,490,000	119	0.1	1.0%	0.7%	9,527,000
	Total Indicated – All Deposits	5,545,000	311	<i>n/a</i>	1.5%	3.8%	55,413,000
Inferred	Bellekeno Deposit ^{3&4}	243,000	428	<i>n/a</i>	4.1%	5.1%	3,344,000
	Lucky Queen Deposit ^{3&5}	150,000	571	0.2	1.4%	0.9%	2,754,000
	Flame & Moth Deposit ^{3&6}	348,000	366	0.3	0.5%	4.4%	4,095,000
	Onek ^{3&7}	234,000	134	0.4	1.2%	8.9%	1,008,000
	Birmingham ^{3&8}	52,000	477	0.1	1.2%	1.9%	797,000
	Total Inferred	1,027,000	363	<i>n/a</i>	1.7%	4.9%	11,998,000
Historical Resources	Silver King ¹⁰						
	- Proven, probable and indicated	98,998	1,354	<i>n/a</i>	1.6%	0.1%	4,310,000
	- Inferred	22,581	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 and Flame & Moth are incorporated into the current mine plan outlined in the technical report filed on SEDAR dated December 10, 2014 entitled "Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada". The mineral resource estimates for the project are supported by (a) disclosure in the news release dated December 23, 2014 entitled "Alexco Updates Positive Preliminary Economic Assessment for Expanded Silver Production from Keno Hill Silver District, Yukon"; and (b) a technical report filed on SEDAR dated December 10, 2014 entitled "Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada". The mineral resource estimates for the Flame & Moth and Birmingham deposits are further supported by disclosure in the news release dated April 30, 2015 entitled "Alexco Announces Indicated Silver Resource Estimate Increases of 17% at Flame & Moth and 26% at Birmingham, Resulting in a 10% Increase Overall for Keno Hill Silver District".
- 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 resources are as at September 30, 2013, and reflect the geologic resource less estimated subsequent depletion from mine production.
- The mineral resource estimates for the Lucky Queen deposit have an effective date of July 27, 2011.
- The mineral resource estimates for the Flame & Moth deposit have an effective date of April 28, 2015.
- The mineral resource estimates for Onek have an effective date of October 15, 2014.
- The mineral resource estimates for Birmingham have an effective date of April 28, 2015.
- The mineral 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 mineral resources for Silver King are supported by disclosure in the news release dated December 23, 2014 entitled "Alexco Updates Positive Preliminary Economic Assessment for Expanded Silver Production from Keno Hill Silver District, Yukon".
- The disclosure regarding the summary of estimated mineral resources for Alexco's mineral properties within the Keno Hill District has been reviewed and approved by Scott Smith, P.Eng., former Bellekeno Mine Manager and a Qualified Person as defined by NI 43-101.